ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. XCI, No. 2 — Thursday, July 10, 1930

Paper Producton Shows Decrease for May

According to Mill Reports to the American Paper and Pulp Association and Cooperating Organizations Paper Production For the Month Was 2 Per Cent Under April and 11 Per Cent Under May 1929—News Grade Sulphite Kraft and Soda Pulps Were the Only Grades That Showed Decreased Inventories

According to identical mill reports to the Statistical Department of the American Paper and Pulp Association from members and cooperating organizations, paper production in May showed a decrease of 2 per cent under April 1930, and a decrease of 11 per cent under May 1929. The total wood pulp production in May registered an increase of 1 per cent over April 1930, and a decrease of 4 per cent under May 1929.

The May production of news print, uncoated book, paper board, wrapping, bag, writing, tissue and building paper registered a decrease under May 1929 output. The production of all grades of paper during the five-month period ending May 1930, excepting uncoated book and hanging papers, registered decreases under the totals for the same period of 1929. Shipments of all paper grades, excepting hanging paper, registered decreases during the five-month period of 1930 as compared with the same period of 1929.

All grades of paper, excepting bag and building papers, showed increases in inventory at the end of May 1930 as compared with the end of April 1930. As compared with May 1929, all grades, excepting wrapping and bag papers, registered increases.

Identical pulp mill reports for the five-month period ending May 1930 indicated that 11 per cent more mitscherlich sulphite pulp, 5 per cent more bleached sulphite pulp and 2 per cent more kraft pulp was consumed by reporting mills than for the same period of 1929. The total shipments to outside markets of all grades of pulp during the first five months of 1930 were 7 per cent below the total for the same period of 1929.

News grade sulphite, kraft and soda pulps were the only grades that showed a decrease in inventory at the end of May as compared with the end of April 1930. As compared with May 1929, ground wood and soda pulps were the only grades whose inventory was lower than at the end of May 1930.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF MAY, 1930

Grade	Production tons	Shipments tons	Stocks on hand end of month tons
News print	118,093	114,702	27,924
Book (uncoated)	84,041	78,764	62,302
Paperboard	184,456	183,674	63,139
Wrapping	48,647	48,081	46,406
Bag	14,480	15,126	6,103
Writing, etc.	30,951	30,440	48,181
Tissue	11,434	10,677	10,616
Hanging	5,513	5,509	4,271
Building	6,221	6,575	4,343
Other grades	21,993	22,102	17,777
Total—All grades	525,829	515,650	291,062

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF MAY, 1930

Grade	Production tons	Used during month tons	Shipped during month tons	Stocks on hand end of month tons
Ground wood	105,581	88,353	1,242	95,937
Sulphite news grade	36,171	34,117	2,320	8,356
Sulphite bleached	26,369	24,838	1,488	3,486
Sulphite easy bleaching	3,226	2,924	204	1,147
Sulphite Mitscherlich	7,374	6,119	997	1,327
Kraft pulp	31,579	26,155	5,578	8,178
Soda pulp	25,024	15,866	9,277	3,588
Pulp—Other grades	94	.....	84	21
Total—All grades	235,418	198,372	21,190	122,040

Completing Second Machine for Russia

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., July 7, 1930.—The Bagley & Sewall Company is now completing the second Fourdrinier paper machine for the Volga river mill of the Russian Government and it is expected that the final shipments will be made in August. Shipments of portions of the machine have already been made and the rest will be sent on the way as soon as completed. The crew sent to Russia last summer to install and place in operation the first machine made for the Soviet government will remain in that country until the later contract has been filled. This group is under the supervision of Richard Gray, chief installation engineer, who plans to teach the Russians the methods of operating the machinery before returning to this country.

C. E. Kinne, vice president of the Bagley & Sewall Company, returned this week from an extended business trip to the Pacific Coast where he visited paper mills at Portland, Ore., Seattle, Wash., Vancouver and Port Angelus, B. C. He found business good in all branches of the paper industry although conditions were not so good in the lumber industry.

To Finance Zeloid Products Corp.

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 8, 1930.—A conference was held in New York City last week between the president and officials of the Zeloid Products Corporation and officials of the Austin P. Fox & Co., Inc., with reference to the first steps to be taken in the financing of the Holyoke concern by the Fox firm. It was intimated at the close of the session that the sale of present stock of the Zeloid concern might not be necessary.

Further News Print Developments Anticipated

Government of Newfoundland to Encourage Expansion of Industry — Anglo-Newfoundland Development Co. Plans Extension of Grand Falls Plant—Construction of Another Mill In Gander Territory Proposed—Ambitious Projects For British Columbia

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., July 7, 1930.—The shadow of further possible news prints development projects still hangs over the news print industry here, tending to obscure the future and give a feeling of insecurity to investors. According to present advices there is every possibility that large projects for the production of news print will be put into force in the not distant future at the Atlantic and Pacific ends of the Dominion, at points from which the leading consuming centers in the United States can be reached by ocean freightage.

In Newfoundland, where the present news print mills are running to capacity despite the depression, it is clear that the Government is determined to encourage further development to the limit. The Hon. P. J. Cashin, Minister of Finance, has just announced in his budget speech that the Anglo-Newfoundland Development Company plan an extension of their Grand Falls news print plant at a cost of $1,500,000. He further announced that before the next session of the legislature a proposition for the construction of another paper mill in the Gander territory will be consummated. This is taken to refer to the proposed mill of 1,000 tons per day capacity in connection with which the Hearst interests have been negotiating, and the confident tone in which Mr. Cashin referred to the project indicates that the negotiations have gone much further than has been generally supposed.

From Vancouver comes the announcement that three important pulp and paper combinations are negotiating for an early start on large scale production in British Columbia.

These interests are Backus-Brooks of Minneapolis, International Paper Company and the Hearst publishing house.

Backus-Brooks are said to be negotiating for establishment of a large news print mill somewhere in the province, they having already acquired considerable pulpwood. These interests have developed paper mills extensively in the Middle West, but have never before become active operators on the coast.

The same is true of International Paper Company, which has for some time held an interest in the Vancouver Island holdings of the old Beaver Cove Pulp and Timber Company, which a few years ago was taken over by the International Harvester Company. This deal is said to await settlement of the general financial situation and the news print market, all the necessary details having been worked out some time ago for early start of construction. This included acquisition of water power in the Nimpkish River.

The interest of Hearst is still comewhat obscure. It is known that the big publishing house is anxious to find a source of news print for its newspapers at Los Angeles, San Francisco, Oakland and Seattle, and the Hearst interests have frequently been mentioned in connection with negotiations for a mill site on the Fraser River valley.

Meanwhile Powell River Company is proceeding with expansion at Lois River, where $8,000,000 is being spent on a new water power and news print development which will bring the company's daily capacity to 650 tons.

Crown Willamette Pulp and Paper Company, now associated with the Zellerbach Paper Company, has obtained right to water power at Campbell River, but development has been held in abeyance pending improvement in the market situation.

International Initiates Advertising Campaign

That the International Paper Company is desirous of propitiating public opinion in Canada, and of offsetting any prejudices which may have been aroused by the controversy over prices and the pooling of orders in which Premier Taschereau figured so prominently some months ago, is shown by the fact that the company is now running an advertising campaign in the leading news papers here, the object of which is stated in the advertisements to be to tell "What International Paper and Power Company is, who owns it, what are its policies, and where and of what nature its undertakings. It is further stated that the company is owned, including subsidiaries, by 79,000 shareholders in Canada, Britain and the United States," and that its securities are listed and traded in on the Montreal and New York Stock Exchanges.

The advertisements deal modestly with straight statements of facts about the company, without any deductions or moralizing. Each advertisement is of 1,000 lines.

News Print Stocks

The way in which current conditions have affected the prices of the common stock of news print concerns is seen in the following comparisons between the high and low of last year and this year with the present prices:

	1930		1929		
	High	Low	High	Low	Now
Abitibi	42¼	22½	58½	35	26
Canada Power	19½	10¼	39½	17	14
Brompton	31½	22½	49	25	25
Bathurst "A"	10½	8	10	..	8
Belgo-Canadian pfd.	101	92½	107	98	90
Price Bros.	84	64	121	71	64
St. Maurice, pfd.	91	80	98	90	83
Donnacona	27¼	20	28	21	20
St. Lawrence	13	6½	25	10	9

Important Newfoundland Court Decision

A decision of much importance regarding timber licenses has just been established as a precedent by the Newfoundland Supreme Court in forfeiting licenses held on 1,000 square miles of timber by George Jardine and Michael J. Martin. This decision may affect the holding of nearly 7,000 square miles of timberland in Newfoundland and 11,000 square miles in Labrador.

The judgment upheld the right of the Government to forfeit the licenses on the grounds that the defendants had not complied with the terms on which they held the property. Under the terms of the license the parties were obliged to pay $2 a square mile and a royalty of 25 cents per 1,000 feet for timber cut. They were to commence within a year, and cut 100,000 feet every 24 hours or to expend $50,000 in the erection of mills for the manufacture of pulp and paper within five years.

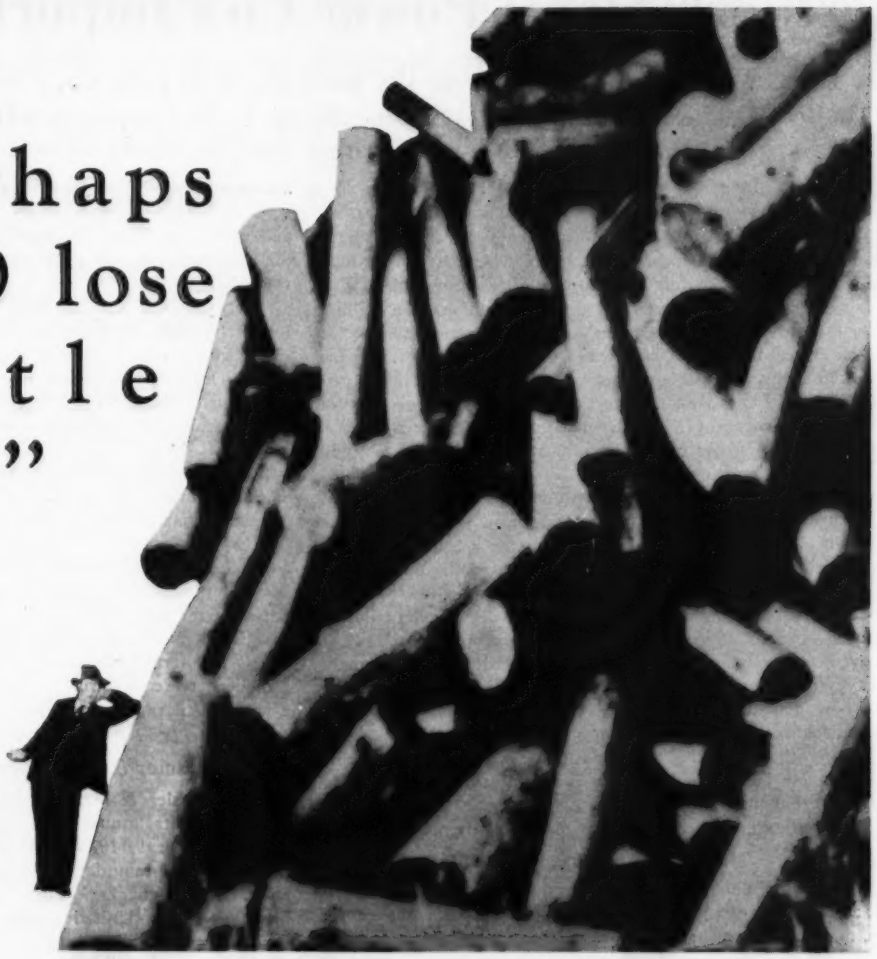
Defence Contention

The defence contended that because they had paid their license fees until they were refused in November, 1928, and because the former government had waived the other conditions previous to the commencement of this action, forfeiture could not be exercised.

The judgment says "the acceptance of annual rental waived the right to forfeiture existing at the time when the rent was received, but it did nothing more. It did not compel the minister to accept rent for a succeeding year if the breach of the condition continued."

Thirteen parties hold licenses similar to that of Martin and Jardine, involving 11,000 square miles in Labrador, while in Newfoundland there are 62 licenses covering 6,800 square miles of timberland.

"Perhaps we DO lose a little fibre"



Paper making has changed. There was a time when a mill owner could look at his white water sewer and say, "Perhaps we *do* lose a little fibre. But what of it! There's more where that came from; you don't see us going broke do you?

* * * * *

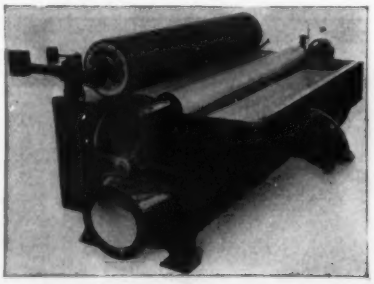
Sure enough; paper making has changed. ***But white water is still going to the sewer.*** Every paper maker knows that when a gallon of water leaves the mill, it takes a little fibre with it. And every paper maker can, if he chooses, figure exactly how much that little bit of fibre amounts to when it is multiplied by gallons per day and then multiplied again by 365. He can figure the yearly cost, in dollars, of the fibre that's going to the sewer instead of the finishing department. Then he can add to that the cost of the size and the starch and the filler which have gone along with the fibre. Finally, he can top off his sewer account with the cost of the water itself: the pumping, the filtering, the heating to mill temperature.

* * * * *

You have done all that. And, along with most other paper makers, you have decided that the only way to stop all those losses was to stop any water at all from getting out of the mill.

* * * * *

That is just exactly what the Bird Closed System accomplishes. It stops



all white water losses, because it keeps everything, including the water, right in the mill where it belongs.

* * * * *

The Bird Closed System, was developed around a completely new idea on the handling of white water: the Save-All was considered a vital part of each paper-making unit. Each paper making unit has its own Save-All and its own white water system. That's why the Bird Closed System *works*. It eliminates the losses due to color changes, breaks and shut-downs.

* * * * *

The Bird Closed System employs extremely simple equipment. The Bird Save-All, the heart of the System, has been carefully re-designed to give high operating efficiency with the greatest economy. Existing Bird Save-Alls can readily be modernized.

* * * * *

The Bird Closed System can be applied, and applied very profitably, in any mill . . . *in your mill*. Let us give you the whole story, together with a detailed flow diagram which presents the System as it works out in a typical mill. Write today. Bird Machine Company, South Walpole, Mass.

BIRD CLOSED SYSTEM

4194

Northern States Power Co's Important Project

Dells Dam, Which Supplies Power to the Dells Paper & Pulp Co.'s Mill At Eau Claire, Wis., To Be Considerably Improved—Stilling Basin To Be Constructed Below Apron of Large Dam—Three New Generators Have Recently Been Installed

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., July 7, 1930.—Improvements costing approximately half a million dollars are being made by the Northern States Power Company on the Dells dam, which supplies power to the Dells Paper and Pulp Company's mill at Eau Claire, Wis. The largest part of the project is the construction of a stilling basin below the apron of the large dam, and covering almost the entire length of the dam. This will be made of reinforced concrete. The basin will prevent backwash and the undermining of the abutments of the dam, in case the water tends to deepen the river bed. Churning of the water will also be lessened.

An old wooden flume carrying water to the water wheels will also be removed and a new one built of concrete. This will remove obstructions now interfering with smooth flow of the water, and will provide a more powerful and faster flow so the production of the wheels will be increased. Later on the breakwater of the tail race will be lengthened and the channel for the outflow will be deepened so as to increase the draught on the wheels.

Power from this dam formerly operated the grinders in the pulp mills, but arrangements were made recently by the Dells Improvement Company to lease the dam to the power company, and have all power supplied from its several hydro-electric plants. Three new generators have also been installed, operated by the water wheels formerly used for the grinders.

Following the changes in power supply, the Dells Paper and Pulp Company built an addition to the pulp mill and moved the grinders to that unit. The old pulp mill is now a generating station, in which extensive electrical equipment has been installed.

Falls City Mill Shut Down

Last week the Falls City Manufacturing Company, of Oconto Falls, a subsidiary of the International Paper Company, was closed down, and the 300 workers laid off. No announcement was made by officials as to how long the shut down would last. It has been reported that the company will take advantage of the suspension to modernize the mill, in which case it will be out of production for at least three months.

Escanaba to Resume Operations

Operations will be resumed within about a week at the Escanaba Paper Company's mill at Escanaba, Mich., following completion of repairs caused by the breaking of two power dams. A closer checkup reveals that the damage was not as great as at first anticipated. The water reached a level three feet above the window sills at the pulp mill, and flooded the interior of the dynamo room. The basement of the main paper mill and the steam plant were also flooded. Motors were put out of commission but equipment was transferred from other parts of the mill so the turbines could be put into operation to furnish current to utilities depending upon this source of supply. The damage at the Boney Falls and Chandler Falls dams amounted to about $15,000. Only an earthen embankment was washed away from the former by the rush of waters from storm swollen streams, but part of the concrete work was taken away on the latter. The company lost about 150 cords of peeled pulpwood. A plot of land on the artificial lake which had been beautified by Joseph H. Slater, manager of the Escanaba Paper Company, was devastated.

News of the Industry

Although the company had just started operations in a new two story building, the Allen Waste Paper Company, Menasha, Wis., has found it necessary to enlarge its facilities greatly. An addition as long as the present building has been started, and will be 80 feet wide. This will give added working and storage space, and will house a conveyor system for the more convenient handling of the bales of paper received for assortment and reloaded for shipment.

Safety records of the Kimberly-Clark Corporation's mill at Kimberly, Wis., are reaching interesting totals. This mill, one of the largest in the state, has operated for 78 days without a lost time accident. The record was celebrated by the employees with a pavement dance, with refreshments served by the company.

An organization campaign is being conducted at Green Bay, Wis., by officers of the Wisconsin Federation of Labor in order to rebuild the membership of the local unit of the Papermakers' International Union. The local once had a membership of more than 500, but it has dwindled to about 100. The Pulp Workers' Union has 150 members.

Publishers of daily newspapers in Wisconsin are being furnished summer recreation by George W. Mead, president of the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. Mr. Mead purchased a lumbering camp near Antigo, Wis., in the state's northern forest and lake region, and has converted it into a modern recreation camp. Publishers are being invited to spend a vacation there enjoying fishing and other outdoor pleasures.

Roessler & Hasslacher Have Sales Meeting

The Roessler & Hasslacher Chemical Company, New York, N. Y., held its annual sales and service convention at Niagara Falls, on June 9, 10, 11. In attendance were executives from the company's manufacturing plants and New York offices, district sales managers, sales and service men from various branches in the United States, Canada and Mexico. The convention was presided over by Dr. H. R. Carveth, president of the company.

Activities of the convention included inspection tours about the Niagara Falls plant, visits being made to several of the process departments. The business sessions were featured by pertinent papers discussing manufacture, service and sales of R. & H. products.

The annual banquet was held on the evening of June 10, at the General Brock Hotel, Niagara Falls, Ont. The speaker of the evening was J. E. Hatt, general manager, du Pont Cellophane Company, New York, N. Y.

Present were: M. Kutz; G. A. Bode; A. Frankel; H. R. Saacke; G. F. Hasslacher; P. Moll; J. S. Burwell; R. M. Levy; F. C. Schumacher of New York; Drs. S. Temple and C. J. Wernlund and Messrs. T. D. Ainslie; L. M. White; F. E. Stewart; C. S. Williams of Perth Amboy; Messrs. C. B. McCloskey and T. Lenchner of Pittsburgh; S. C. Harris of Philadelphia; C. Seiler of Baltimore; W. F. Zimmerli of Akron; W. Vogel of Mexico; A. C. Stepan of Chicago; C. Ditmar of Cleveland; and G. W. Goerner of Boston.

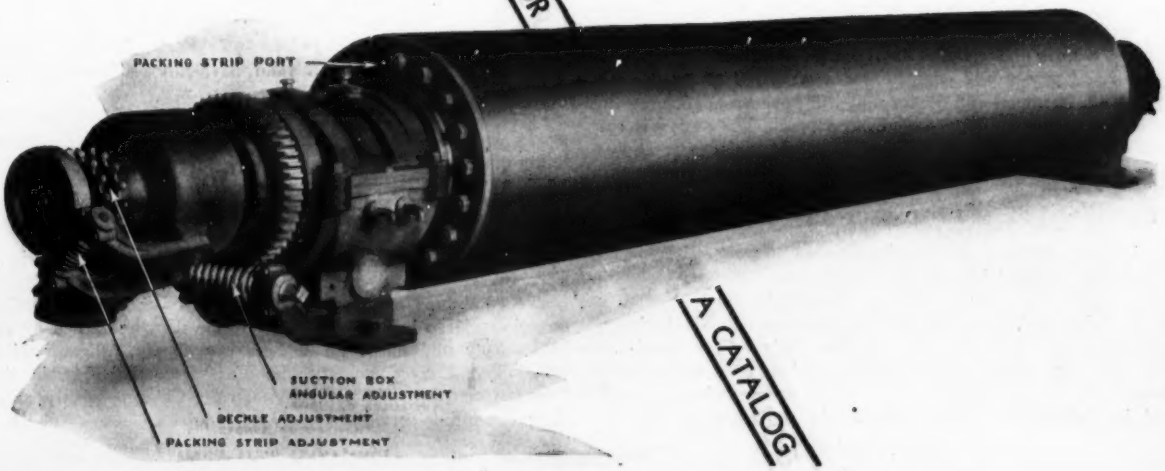
The Niagara Falls attendance included: Dr. M. J. Brown; P. J. Carlisle; Dr. H. R. Carveth; N. C. Cooper; W. Coopey; T. Coyle; Dr. F. J. Dobrovolny; J. Dunning; J. Faill; W. F. Flaherty; W. M. Gager; Dr. H. N. Gilbert; A. M. Hamann; Dr. E. A. Harding; Dr. D. A. Holt; J. A. Kenney; J. J. Landy; Dr. G. E. Lewis; P. L. Magill; R. W. Marshall; M. L. Ross; W. Ross; Dr. E. A. Rykenboer; D. V. McLean; D. O. Notman; L. V. Parkes; W. H. Vining; Dr. C. W. Tucker; C. A. Vincent-Daviss.

WRITE YOUR NAME AND ADDRESS ON THE MARGIN OF THIS PAGE AND MAIL IT TO US FOR A CATALOG

As an experiment, one mill ran a Downingtown Suction Press Roll for a considerable time with a loading of 300 pounds per inch of face of top roll in a reversed press. ✓ The newsprint was delivered to the dryers 40% bone dry and then dried on twenty-eight 48" dryers at a speed of 630 F. P. M. with a steam consumption of 3500 pounds per ton of paper. ✓ As far as we know, this is the highest nip pressure that has ever been carried by a suction press roll. ✓ New catalog sent on request.

Downingtown Manufacturing Co.
Downingtown, Pa., U. S. A.

DOWNINGTON KILBERRY PATENT SUCTION ROLL



Paper Demand Falling Off Slowly in Chicago

Business Affected By Vacation Season, Although Several Grades of Paper Are Holding Up To Schedule Exceptionally Well—News Print Production and Consumption Lower, Concurrent With Decline In Advertising—Fine Papers Are Fairly Steady

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., July 7, 1930.—Business is falling off slowly as the third quarter—and the vacation quarter—of the year comes on. In some instances papers are holding up exceptionally well and dealers in these lines are facing the summer decline with the prospects for Fall fairly bright. News print was one of the first to feel the decline with production reported now as somewhere between 70 and 75 per cent. The let-up is concurrent with the decline in advertising lineage. The demand for book and cover papers continues to be fair and the market in these grades is steady.

Production in board is falling off and the demand is also slackening. The quiet season is just ahead and, in this period, it may be possible, according to reports, to somewhat improve the price situation which has been troublesome to the board market for some time. Tissues are steady although a more pronounced slackening is expected this week. Fine papers continue to be good considering the season and dealers are optimistic over the progress made in these lines. In the kraft market little change is expected until Fall. Prices are still very easy and the combination of Summer and general slow readjustment is expected to take up all of the next few months. Waste papers, especially the high grades, are reported fairly active.

Western States Envelope Co. Progresses

Considerable attention is given in the current issue of the *United States Publisher* to the Western States Envelope Company of Milwaukee. The story gives a brief history of the concern as told by George F. Moss, president, who traces the early moves of the business up to the moving of the plant into a new structure at 740 South Pierce street. The new concrete building now permits stock storage and manufacturing processes to be carried on on one floor. Raw material is brought on to a lower floor from a still lower level. After the raw materials are brought to the main floor everything is handled on the same level, resulting in a great saving of time and effort. Mr. Moss is the son of the former treasurer of the J. W. Butler Paper Company and George F. began his active connection with the business in the Milwaukee branch of Butler's, graduating into his present business in 1909. A younger brother, John B. Moss, is sales manager in Milwaukee. A son, George, is in charge of the stock and buying.

Paper Merchants to Hold Summer Outing

Dates for the annual summer outing of the Chicago Paper Association have been set for July 24 at the Medinah Country Club, according to William Shapland, of the Fred Rentz Paper Company, who is making preliminary arrangements for the event. Members and guests will compete for a large list of prizes, will enjoy both a luncheon and dinner and will have an opportunity to play 36 holes over the sporty Medinah course. The outing is expected to attract a large number of members and guests and is now receiving considerable attention from members of the association.

News of the Trade

The Chicago office of the Whiting Paper Company is issuing its new catalog, featured because of its perpetual looseleaf make-up together with catalog and price list combined. Each section is indexed and tabbed so that the various divisions—Bonds, Ledgers, Linens, Writings, etc.—are grouped into their proper classifications. The prices follow along with the various sizes and weights and on the bonds, the envelopes are listed under each grade and priced in plain figures. The adoption of the looseleaf idea in paper catalogs seems to be getting more popular as a standard form, simplifying the changes that arise from time to time. It is economical from the standpoint of making such changes as only the sections or pages affected need be reprinted. W. J. Barnes is Chicago manager of the Whiting organization.

"No Guessing—When You Use Atlantic Bond" is the title of Eastern Manufacturing Company's new folder which is making quite a hit in the Chicago paper market. It carries the announcement that substance numbers are now being watermarked on every sheet of Atlantic Bond. This procedure, according to Eastern, will prevent errors and misunderstandings, making possible the determination of weights by simply holding the sheets up to the light and looking through them. The folder contains several sheets so marked—illustrating the new substance water marking. Chicago distributors of Atlantic Bond are the LaSalle Paper Company.

New lines recently adopted by the Chicago Paper Company include the papers of the Hammermill Paper Company, Strathmore Paper Company, and the Thomas N. Fairbanks Import Division of the United States Envelope Company.

The Chicago Pulp Company, of 2336 Wolfram street, announces the addition to their list of representatives of R. J. Welsh, 503 Healy street, Atlanta, Georgia.

By unanimous vote of the Board of Directors of the Chicago Athletic Association, W. Philip McNulty, president of the McNulty Paper and Twine Corporation; James F. McNulty, vice-president, and Michael McNulty, treasurer, have all been elected members of the club.

Improvement Expected in Indianapolis

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., July 7, 1930.—While there has been no appreciable change in the paper market here, it is pretty well conceded that prices have gone just about as low as they can. It is felt that any price changes made from now on will be upward. Demand for fine papers is spotty. In some sections of this trade area, there seems to be some demand, but for the most part the demand is slow and collections are difficult.

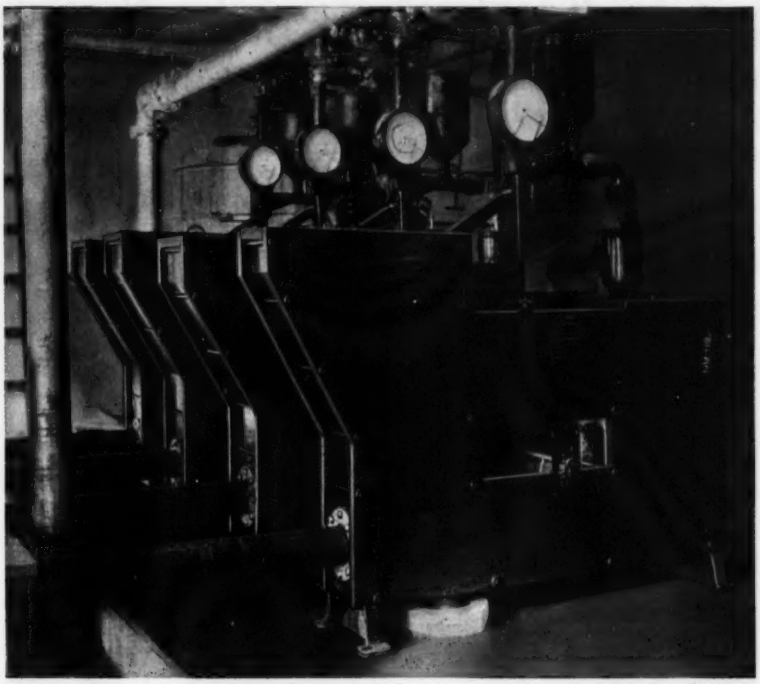
Kraft appears to be a little stronger in price, but there has been no improvement in business. The bag market also is dull, but prices are a little firmer.

Some demand is coming for building papers, but the volume is below that of last year. However, there is a feeling here that this business will improve before fall. Prices are very low and some jobbers and dealers with fair stocks are anxious to reduce them with concessions.

Local paper stock men are unwilling to dispose of their huge stocks until more favorable prices prevail and they keep accumulating more stocks at ridiculously low prices.

Rustless Alligator Monel Metal Belt Lacing

Alligator Monel Metal Belt Lacing is now available in all sizes in standard boxes or special lengths. Where highly corrosive conditions are encountered, it solves the problem of destruction of the lacing by rust or of the damage caused by rust. Mill supply and hardware jobbers can supply Alligator Monel Metal Belt Lacing and the manufacturers, the Flexible Steel Lacing Company, 4689 Lexington street, Chicago, gladly extend their consulting service in reply to inquiries.



CONTROL YOUR STOCK CONSISTENCY

with the DEZURICK Regulator

Guessing stock consistency is costly practice. Because it is guessing quality.

And nowadays quality is something which demands anything but guesswork.

With the Dezurick Regulator it is very **easy** and decidedly **inexpensive** to control the consistency of your stock.

No power is required. No attention is necessary. All the stock passes through the Regulator on its way to the Jordans, and water is automatically added whenever the density of the stock exceeds the required consistency for which the machine is set.

That's all there's to it—simple, efficient and obviously economical. Yet all the common disadvantages of light and heavy beater dumpings are eliminated. Greater uniformity is the result.

VALLEY

Equipment for Paper and Pulp Mills

New York Office: 350 Madison Ave.
Western Mfg. & Sales Div.: Smith & Valley Iron Works Co., Portland, Ore.
Canadian Representatives: Pulp & Paper Mill Accessories, Ltd., Montreal, Canada

If you are not reaping the benefits of this consistency control equipment, let us tell you some interesting things about the Dezurick Regulator. Write the Valley Iron Works Co., Appleton, Wis.

Demand For Paper Is Fairly Active In Boston

Some Fine Paper Manufacturers Experience Excellent Request For Time of Year—Substantial Volume of Inquiries For Future Requirements Has Been Received—Wrapping Paper Market Exhibits Spottiness—Box Board Section More Or Less Inactive

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 7, 1930.—A fair volume of paper moved during the last week, although the holiday, with many houses closing July 5, lessened the amount of business. Some of the fine paper trade say that the demand is good for the time of year. Inquiries for substantial amounts of fine paper are being received, indicating that consumers are at least thinking of buying. In some cases, dealers are very busy and in others they "can't kick." In wrapping paper, some report a fairly good demand, while others regard the market as rather quiet. A manufacturer says that kraft is "picking up." Box board has been more or less inactive during the week, although prospects appear favorable. Values remain at the same levels.

Most grades of old papers and rags continue in the doldrums —"deader than ever," says one dealer. He believes in raising prices, feeling that a demand would result. Quotations are practically unchanged.

Arthur E. Ham Honored

A beautiful basket of roses, a gift of friends in the trade, adorned the desk of Arthur E. Ham, of Arthur E. Ham & Sons, dealers in fine paper, last week, in recognition of the rounding out of a decade of business on his own account. Mr. Ham first "put out his shingle" at 10 High street, where he is still located, on July 1, 1920. His son, Herbert C., became a member of the company in 1921. In 1923, another son, James L., joined the firm, and in 1927 a third son, A. Lawrence. The firm has the same warehouse at 40 Purchase street, but now requires three floors instead of one, which was originally used. Many friends called at the office Tuesday to extend their best wishes.

Hand and Arrows is another new line of the Worthy Paper Company, Mittineague, Mass., of which Arthur E. Ham & Sons are distributors. This all rag paper is made of specially selected stock to insure permanency in books, brochures and leaflets. Made in white and toned, the paper is demonstrated in folders being issued, showing the two surfaces, cold-pressed and smooth, in which the papers are stocked. Envelopes are stocked in white and toned and the two surfaces in two sizes, Crest and Chevron.

Globe Paper Co. Expands

The Globe Paper Company, 110 Fulton street, distributor of paper bags, paper napkins, other paper specialties and twines, has taken over the business of Frank G. Morse, 8 Albany street, as of July 1. Mr. Morse and two of his salesmen, Charles M. Jackman and Gerry von Klock, have become associated with the Globe Paper Company. Some three years ago Mr. Morse bought the business of the C. B. Botsford Company. Joseph Goodman, president and treasurer of the Globe Paper Company and Charles Young, vice president, have their headquarters at the office of the company at 10 High street. Sol Croan, clerk and secretary, has active charge of the Fulton street office.

Paper Dealers Sustain Loss

Manufacturers supplying Stimpson & Co., Inc., with paper are cooperating with the firm to meet their needs after a fire which destroyed $100,000 worth of paper. The fire, thought to have originated from spontaneous combustion, broke out in a large storage building in the Boston and Maine railroad yards recently and raged for four hours before it was brought under control. The loss of Stimpson & Co. is covered by insurance except for a few thousand dollars. The H. J. Dowd Company, paper dealers, sustained a loss of $8,000, of which $4,500 is covered by insurance.

News of the Trade

There is great enthusiasm among salesmen of the Arnold-Roberts Company in regard to their Caslon Bond contest. Of the three crews, No. 1, Captain "Si" Slocum, is in the lead, but closely followed by Crew No. 3, in charge of Captain "Lew" Brown. A dinner is to be served by the losers.

The Arnold-Roberts Company is handling a new color, Sunset, finished in cover weights, and Art and Industry Cover, both products of the Advertisers' Paper Mills, Holyoke, Mass. They are distributing Beau Brilliant Cover and Courier Vellum, a lightweight book paper, with sheets in hand-made, snow-flake, canvas and veltone finishes, both manufactured by the Strathmore Paper Company, of Mittineague and Woronoco, Mass.

Executives and members of the sales force of Carter, Rice & Co. Corp., expect to visit the Berlin (N. H.) mills of the Brown Company, July 19. The trip will include staying at the house of Hubert L. Carter, president and treasurer of the Carter, Rice Company, Saturday night and part of Sunday, and horseback riding.

Tileston & Hollingsworth Company have sent out the first of a series of four striking posters, showing the results of color printing on colored paper. The current poster, "from the run of an actual job," advertises an automobile tire and is printed on Milton Text-Yellow-Wove.

J. Allan Odaniel, for many years connected with John Carter & Co., Inc., has joined the forces of Asalph Churchill, paper merchant, of 201 Devonshire street, Boston.

T. M. Dix, vice president of the Spauling & Tewksbury Company, is on a month's vacation in Moultonboro, N. H. E. M. Davenport, treasurer of the same company, leaves for Southwest Harbor, Me., on July 10, expecting to return the first week in September. W. Morton Lincoln, a salesman for the company, left July Fourth for a two weeks' vacation at Boothbay Harbor, Me.

Clifton S. Hall, manager of the envelope department of John Carter & Co., Inc., is recovering from a very serious operation at the Holden Hospital, Holden, Mass.

Ward Howard, Jr., of the Howard Paper Company, Urbana, Ohio and Russell S. Madden, vice president in charge of sales of the American Writing Paper Company, called on the Boston trade last week.

J. L. Van Nort has been advanced to sales engineer of the Boston office of the Reliance Electric and Engineering Company, Cleveland, manufacturers of alternating and direct current motors.

Sefton Container Plant Busy

INDIANAPOLIS, Ind., June 30, 1930.—John Hyde, manager of the Sefton Container Corporation plant at Anderson, Ind., states that business continues good. The factory is operating full time with its full force of workers. Some improvement in the production schedule of the company has been noticed since the business of the Mid-West Box Company was combined with the Sefton industry.

The company incidently owns a field north of the plant containing 67 acres and this has been divided off into 67 parcels where employes of the plant may raise their own gardens.

at your service

COOK Deep-Well Turbine

Type WP

SELF-OILING
WEATHERPROOF

Distinctive in Design
in Duty
in Dependability
in Durability

Bulletin 36
Free

PATENT APPLIED FOR

"The small 1800 R. P. M. turbine is delivering more than its 150 gallon guaranteed capacity and we are certainly pleased with its operation; also, the kind of installation as made by your distributor.

"The service that your distributors are able to render is going to be helpful in winning many friends to the COOK deep-well pumping units.

"We have several of the COOK installations and are also using some COOK strainers, all of which are giving us very good results."

DISTRIBUTORS OF COOK DEEP-WELL PUMPS IN UNITED STATES

Alamo Pump & Equipment Co.,
1923 Atkinson Ave., Milwaukee, Wis.

R. G. Backus,
1153 Leader Bldg., Cleveland, Ohio.

Banks-Miller Supply Co.,
Huntington, W. Va.

E. G. Cain,
Owensboro, Ky.

Carloss Well Supply Co.,
Front and Gayoso Sts., Memphis, Tenn.

H. W. Childers,
232 E. Main St., Louisville, Ky.

Corken Pump & Machinery Co.,
301 Local Bldg., Oklahoma City, Okla.

Forslund Pump & Machinery Co.,
3031 Main St., Kansas City, Mo.

Goetz Supply Company,
432 Sixth St., N. W., Canton, Ohio.

F. Grote Manufacturing Co.,
Evansville, Ind.

Chas. F. Harris, Inc.,
343 So. Dearborn St., Chicago, Ill.

Iowa Machinery & Supply Co.,
317 W. Court Ave., Des Moines, Iowa.

Jeffries & Doherty Engineering Co.,
743 N. Main St., Los Angeles, Calif.

The Link Company,
Jackson, Mich.

Midwest Machinery Company,
5473 Delmar Blvd., St. Louis, Mo.

Momsen-Dunnegan-Ryan Co.,
El Paso, Texas.

Morrison Supply Company,
Amarillo, Texas.
Ft. Worth, Texas.

Murphey Equipment Co.,
412 Hurt Bldg., Atlanta, Ga.
101 Kinney Bldg., Charlotte, N. C.

National Light & Pump Co.,
1632 Wazee St., Denver, Colo.

National Supply Company,
Toledo, Ohio.

Nebraska Machinery Supply Co.,
819 O Street, Lincoln, Neb.

Andrew J. Nicholas & Co.,
1818 N. 25th St., Philadelphia, Pa.

Pacific Pump & Supply Co.,
420 Bryant St., San Francisco, Calif.

Power Plant Supply Co.,
730 Fisher Bldg., Detroit, Mich.

Robinson, Cary & Sands Co.,
St. Paul, Minn.

South Bend Supply Co.,
South Bend, Ind.

Geo. H. Strohm,
20 East Broad St., Columbus, Ohio.

Virginia Machinery & Well Co.,
1319 E. Main St., Richmond, Va.

Weinman Pump & Supply Co.,
210 Second Ave., Pittsburgh, Pa.

Williamson Supply Co.,
Williamson, W. Va.

If in doubt as to your nearest Distributor, write

A. D. COOK, Inc., Lawrenceburg, Ind.

Demand for Paper More Active in Philadelphia

Spurt In Wrapping Paper Market Attributed to Holiday Preparations — Cut By New York Publishers In Price of Popular Fiction Affects Book Paper Situation—Stocks of Local Paper Merchants Not Excessive—Mills Maintain Advanced Prices

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 7, 1930.—Though the past week was shortened in so far as business is concerned owing to the holidays, there was a very satisfying demand for papers among the larger distributors in the wrapping paper group that brought the trade to a conclusion that an upward swing was in evidence and that the market had turned for improvement for the time at least. It may have been that the preparation for the Independence Day vacation and the week end holiday by the public caused a spurt in the wrapping paper market, as the chief consumers were merchants and those department stores where such factors would mean quickening of demand in the many lines of clothing and outing goods that will be needed for the holidays. Apart from the holiday goods that might be needed at this time, there was a brighter side to the paper industry as prices firmed and showed a tendency on the part of the trade to curtail cutting in order to secure orders, as has been the practice for the past few months among distributors. Mills, too, were firmly adhering to prices that have been advanced in the past fortnight and with the stock taking season at hand it is likely that there will be larger buying resources for the manufacturers when the inventory days are over.

Distributors' Stocks Low

Reports of the stock taking records made in the first days of July indicate that the dealers have fairly well cleaned up on old stocks of paper merchandise bought at the high prices of the early year and late Fall of 1929. While in the early months of the year there was freer buying by the dealers from the mills and those stocks purchased at the time subjected to recessions at a later period, the trade apparently has written off its losses and is now ready to replace with fresh wares at prices that are more likely to be maintained in the coming months and particularly when the Fall season revives business generally and advances are anticipated from the manufacturers.

Paper Shipments May Show Larger Volume

While many believe that the depressed business period brought a recession in the volume of paper goods in traffic, those large paper dealers who are nearing the closing of accounts state that there is fairer business records in sight than hoped for and that the closing of the first six months business cycle will be surprising in the total paper sales. However, many of the dealers will show a loss in profits, as they were obliged to clean out at lower prices the many grades of papers that were later so drastically cut in the competition of early springtime. It is recorded by some of the distributors that sales for May and June were slightly over the same period of 1929, despite apparent dullness in the industry.

Book Paper Outlook Uncertain

The outlook for the book paper market is obscured by the present uncertainty which the larger paper dealers must face as a result of the cut of prices of books by large New York publishers who are now placing fiction and other reading matter on the market at $1 per volume against former prices of $2.50 and higher. The recent competition among publishers of such literature in New York and vicinity has reflected in the Philadelphia trade dire disadvantages, as local mill representatives and paper dealers who cater to large publishers find that they are unable to land orders until the local publishers are assured that the price warfare has ceased or that it will not affect their own business. The renewal of semi-annual contracts usually takes place in mid July and normally publishers are open to business transaction about this time. But this year future preparation seems to have little influence on the paper market at this time among such large consumers who state they are waiting and watching and will not make commitments until the present uncertainty is cleared and business gets down to normal.

While the entire book paper situation has been more or less affected, the chief product to be considered in the matter of book paper contracts for this class of literature is bulkier grades used for fiction and the lighter reading matter. Naturally, Philadelphia, which is a large publishing center, must bear the burden of the New York situation pending the outcome of this experimentation with dollar books and local paper men who cater to this class of trade are anxiously waiting for the clouds to roll by before the next half year's contracts are ready so that their normal volume of business may be considered. Though this drifting of business matters makes for duller markets the trade has not been affected by price concessions on the general line of book papers, which hold steadily at the springtime prices.

Thomas M. Royal & Co. Holds Sales Convention

With a program that was educational and progressive in its treatise of business matters affecting the Thomas M. Royal Co. line of bags and allied products in the cellophane specialties, and combining a delightful two days outing at the seashore, the members of the executive staff and officials of the company enjoyed the 1930 Sales Convention held here last week at headquarters, 7th and Grange street. The single day of business conferences and sales talks at headquarters was devoted to the review of the years business and reports of the several hundred thousand dollars increase in the sales of its products which showed the prosperity of the company and the growing demands which have taken place for its many specialities and particularly for the cellophane faced bags which have been enjoying a tremendous sale all over the nation. At Beach Haven, the members of the staff turned to the outdoor diversions of the seaside and to the enjoyment of a two day's fishing trip which showed a record catch of 250 fishes. The guests of the company were entertained at the Ingleside Hotel where dinner and entertainments were interspersed with the fishing parties. Those who joined in the program were Charles Quick, Fort Worth, Tex.; C. J. McKay, St. Louis, Mo.; W. R. Kohl, Winthrop James, of Chicago offices; Ernest Ballard, Herbert Weber and J. J. Donovan, of the New York branch; H. D. Van Horn, of Boston, and Rush Smith, of the Philadelphia headquarters, all branch managers and assistants, and Thomas M. Royal, head of the firm, vice president and sales manager Gordon H. Friend, and John M. Driver, general superintendent of the plant. These officials and Superintendent Driver, presided also at the business meetings.

Paper Trade Associates Win Golf Trophies

Paper trade associates were winners of the 14th Annual Golf Tournament of the publishing, printing and paper industries, held at the Aronimink Golf Club, at Nowntown Square, last Friday. In the line up for the luncheon team play of the morning program, there were two teams—the Reds, captained by Hal T. Sorensen, of the Beck Engraving Company, and the Blues, captained by George Stevens, of the Jessup and Moore Paper Company—the latter being losers and hosts at the luncheon. In the Kickers handicap, there were two prizes awarded to the players in the tie game with C. C. Stewart, paper mill representative, scoring 100, handicap 23 and net of 77 and L. Barbour,

WITCO

Paris Black

Witco offers Paris Black whose quality is unsurpassed. This quality moreover may be depended upon, for the Witco manufacturing policy establishes and maintains the strictest standard of excellence. Paper makers who use Witco Paris Black are assured of a highly satisfactory product.

WITCO BLANC FIXE and EARTH COLORS

Use these fine products for assured results. And profit from the position of Witco as first hands which gives you the economical advantage of buying direct.

Buy Direct and Profit Directly

WISHNICK-TUMPEER, Inc.

MANUFACTURERS AND IMPORTERS

CHICAGO • NEW YORK • AKRON

365 E. ILLINOIS ST. • 251 FRONT ST. • 1101 AKRON SAVINGS & LOAN BLDG.

TRENTON • BOSTON

WITCO owned and operated: Century Carbon Co. and The Pioneer Asphalt Co.

of the Dill and Collins Company, scoring 11, handicap 34 and net 77. In the afternoon there was the game for the award of the cup given by the Paper Trade Association which must be won three times successively before permanent ownership is established and this was won by Howard Satterthwaite, of Satterthwaite Cobaugh Company, fine paper dealers. Mr. Satterthwaite also won a traveling bag for low net. His score was 93, handicap 24 and net 69. Wayne Schantz won the second prize with a score of 80, handicap of 10 and net of 70, while Hal T. Sorensen won the 3rd award with a score of 94 handicap of 10 and net of 74. Leo Supple, of the Whiting Patterson Paper Company, was a 4th prize winner in a tie with Hal Sorensen, with his score of 104, handicap of 31 and net of 74. Luncheon was served in the dining room of the club at noon and in the evening all joined in the dinner with sixty associates seated at the table.

Lowe Paper Co. Entertains Paper Men

Members of the staff and firm of the Satterthwaite-Cobaugh Company, 217 Chestnut street, were entertained to a dinner and golfing contest held at the headquarters of the Lowe Paper Company, at Ridgefield, N. J., in the late June days. The members of the firm, Howard Satterthwaite, Clyde Cobaugh and Frank W. Berry, journeyed to the Ridgefield mills of the Lowe Paper Company, and with the staff made a tour of the plant where are manufactured the line of bristols and card blanks which the Philadelphia house distributes and converts, under the trade mark of Ridgelo. Following a tour of the mills, the group were entertained at dinner and in golfing at the Ridgefield Country Club.

Louis DeJonge Co. Issues New Price List

The Quaker City offices of Louis DeJonge & Co., North American Building, 16th and Arch streets, has issued a new price list on all stocks carried by the manufacturers in printers, boxmakers and bookbinders papers, effective for the rest of the year. All stocks of papers will in the future be carried in 26 inch rolls substituting the former 25 inch rolls which will provide better cutting for the box making industry. There will be no change in the prices of the 26 inch rolls over the former 25 inch width, the larger sold at the same quotations of the smaller cut.

Fancy Papers Inc. Make New Box Covers

Fancy Papers, Inc., recently engaged in the manufacture of fancy box makers papers and linings, at 5356 Chew street, also operating under the name of the Griffiths Sales Company, has added to its line of specialties entirely original and new designs of box makers fancy cover papers which will be ready for the trade by mid summer. The new lines will be especially developed papers and designs in embossed and fancy effects supplied to the trade in rolls. The new assortment will be included in the 1931 advance offerings.

New Wall Paper Plant

There will be constructed at the northeast corner of Jackson and Water street, a wall paper manufacturing plant for the firm of Becker, Smith and Page, which will be given over to the production of papers used by the wall paper industry. The site will house a series of structures, one, two and four stories in height. Bids for the new plant are now being received by the company and are due July 8th.

Record Scott Paper Sales

Scott Paper Company, Chester, Pa., net sales for the month ended June 28 were $1,005,125, compared with $754,542 in like 1929 period, increase of $250,583 or 33 per cent. Net sales for first six months totaled $4,421,524, against $3,912,254 in first six months of 1929, increase of $509,270 or 13 per cent. June sales of Scott were not only the largest for any month in company's history, but also marked the first time that company transacted over $1,000,000 of business during one month. First half year's sales also reached a new high mark. The company manufactures mechanical wood pulp, toilet tissues and tissue towels and transacts the largest volume of business in its phase of the paper industry in the world. The unusual increase in Scott's business over June was accounted for in part by a special sales effort over the period, accompanied by a larger advertising program than normal. For the month a goal of $1,000,000 in sales was set.

Profits of the company for the first half year will also set a new high mark. Per share earnings, it is probable, will run around $2.75 on the common. This would compare with $2.29 a common share in first half of 1929. For the first five months of the year, Scott earned $2.08 a share on 155,998 common shares then outstanding as against $1.65 or 150,000 shares in corresponding period last year. Scott's larger profits this year, while accounted for in the main by increased sales, are in part due to economies effected in operations. This has resulted in a better margin of profit as compared with last year. For the first five months this year net income totaled 11.4 per cent of gross, while in the like 1929 period it amounted to 9.3 per cent of gross.

William Mann Co. Elects Officers

Election of officers to the William Mann Company, bank and commercial stationery manufacturers and dealers in papers required for such purposes, 529 Market street, held last week, resulted in the selection of the following officials and directors: president, William Mann Prizer; vice president and treasurer, Cooper H. Prickitt; assistant treasurer, G. M. H. Holmes; secretary, Joseph S. Wilds; assistant secretary, George G. Peterson; directors, Agnew T. Dice, John M. Morissey, C. H. Prickett, William Mann Prizer and J. Gowen Roper. Report for the year ended April 30, shows sales at $1,167,770, an increase of $37,000 as compared with the year of 1929. After operating expenses and cost of selling and other charges, there remained net earnings of $36,252.

Elias Magil Wins Additional Honors

Elias Magil, who matriculated from the University, a few days ago with a high honorary record and award of research scholarship of $2500 and appointment of the presidency of his class and fraternity, has again been honored as one of the thirteen members of this year's class of the University of Pennsylvania, elected to the Pennsylvania Chapter of the Order of the Coif, national honorary legal fraternity. He is the son of Meyer Magil, head of the Penn Card and Paper Company, 20 North 6th street.

John M. Driver in Bankruptcy Proceedings

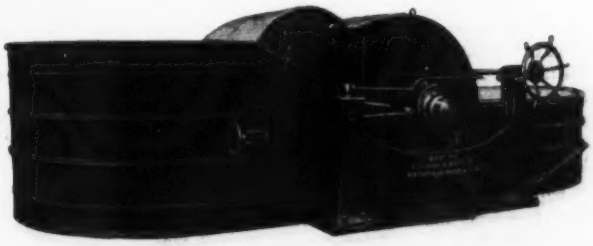
John M. Driver, for many years engaged in the manufacture of glassine products and head of the former John M. Driver Company, Inc., operating a large plant at 57th street and Lancaster avenue, was involved in bankruptcy proceedings last week in the United States District Court here. A voluntary petition stating liabilities as $58,935 and assets as $10,000 was filed with the petition. A meeting of the creditors is scheduled for July 9 at 2 o'clock in the offices of John M. Hill, appointed referee by the Court, in Room 614, Bulletin Building, Juniper and Filbert streets. The Driver Company recently was sold under receivership to the Millprint Products Corporation, Milwaukee, Wis., who have continued the operation of the large plant formerly owned by the Driver interests, producing its own line of containers and cartons in printed and specially developed designs for the food and cigar industries. The Driver Company also produced a line of cellophane products and wraps and was the first concern to print on cellophane. John M. Driver, former head of the company, is now employed as superintendent of the plant of Thomas M. Royal & Co., one of the largest manufacturers in the East and has a reputation as an expert in manufacture of glassine and cellophane products of original designs and artistry. He is a pioneer in converting in cellophane products in the paper industry and was the first in this city to make this now favorite cover and display sack for the mercantile and food and other industries.

Jones

A name that has won a world-wide reputation through 75 years devoted to paper-making progress

PAPER-MAKING MACHINERY E.D. JONES ESTABLISHED 1805 PITTSFIELD, MASS.

"BEATERS BY JONES" Present no Problems



IMPROVED HIGH SPEED BEATER In Wood or Iron Tub.

This beater functions smoothly and continuously, insures uniform stock, eliminates beater problems, enables the superintendent to give closer attention to his other mill problems.

Built in all sizes and equipped with non-corrosive tackle if desired, also furnished with hydraulic or quick relief lever and roller, collar oiling or babbitted bearings.

E. D. JONES & SONS COMPANY

PITTSFIELD . . . . MASSACHUSETTS

BUILDERS OF HIGH-GRADE MACHINERY FOR PAPER MILLS

Ontario Paper Mills On Satisfactory Schedule

Provincial Manufacturers Average Up Well Despite Holiday Period Which Has Not Materially Affected Activities—Some Fine Paper Plants Are Active While Others Are Running Light—Book Mills Have Enough Orders For Most of Summer, At Least

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., July 8, 1930.—While the wholesale paper trade in Ontario is still somewhat spotty there are signs of a steadying down process and all told it would appear as if an average summer business is being done in fine papers, with coarse papers selling slowly. It is still a small order market, however, with no section of the consuming trade buying more than will meet their immediate requirements. The printing trade, for instance, most sections of which are doing fairly well, is not stocking up and in not a few cases jobs are taken, set up and fully prepared for the presses before orders for paper are placed. However, the wholesale paper dealers are getting some nice business from the larger printing houses and the lithographic plants are using quite a sizable tonnage of stock. With excellent facilities at hand for delivery by rail or truck all over the province and with paper houses vieing with each other in the way of service to customers the paper purchasers have been encouraged to delay buying until the last minute because they know they can always get their stock promptly following the placing of their orders. June seems to have shown some improvement in volume of sales as compared with the previous month and were it not for the presence of the holiday season now and for several weeks past the tonnage of fine papers sold by the paper merchants would have shown some increase. As it is, the trade generally estimates that it is holding its own quite nicely in the face of adverse business conditions in most commercial lines throughout Canada. A general election is scheduled for the Dominion in a few weeks time and that has not been helping business any, although it helps the paper dealer and the printer to some extent for elections cannot be run without the printed page.

Some of the fine paper mills are busy and others are running light. On the whole, however, manufacturers are averaging up well and so far the presence of the holiday season has not materially affected activities of the mill trade. In no case are orders far in advance of the machines which, of course, is hardly to be expected under present conditions although in the case of the book mills there are enough orders coming through to guarantee steady operations for most of the summer at least. There is more book paper being sold than any other line. Coated stock is meeting with a better demand than existed for some months and while occasionally a quiet week or two are encountered the months are averaging up pretty well. Bond, ledger and writing mills are only moderately busy but they are doing as well as was anticipated early in the summer and an improvement is looked for now with a culmination of really good business in the Fall. General business conditions are not such as to induce ready sale of coarse papers. Retail trade in most lines is quiet and this has affected the wrapping paper output the market for which is somewhat dull. Kraft sales, also, have suffered some both domestically and abroad and until general business conditions improve to a greater extent than is being shown now, sales of that commodity will likely be light as compared with its usual prosperity.

While the wholesale trade in light weight papers has been suffering considerably of late the mill trade is quite active and mills are placing some nice business in toilets, tissues and specialties. Such lines as grease proof, glassine and waxing papers are moving none too freely and what business there is going in these lines is hard to get. Canadian-made blanks, blotting and manilas are moving quite well. On the other hand, paper converting lines are moving slowly. Envelope manufacturers are fairly busy and a few manufactured stationery lines are active but most of the business being secured by the converting trade now is for future delivery and current orders are light in volume. Box board manufacture is still suffering from over production and most of the mills are operating considerably below capacity, while the paper box manufacturing trade reports business as draggy. The rag and paper stock market is quiet, with only a moderate demand from the mills and collections relatively light.

Notes and Jottings of the Trade

With the message that trade in the Maritime Provinces of Canada is remarkably good, with an excellent outlook for the paper business, Charles S. Taylor, of the sales staff of Alliance Paper Mills, Ltd., has returned to Toronto after an extended business trip through the Maritimes during which he visited Halifax, Truro, St. John, Sackville and other centers on or near the Atlantic seaboard.

A recent visitor to Toronto was Edward Beck, Montreal, secretary-manager of the Canadian Pulp and Paper Association. Mr. Beck attended a meeting of the fine paper section of the association.

The Alliance Paper Mills, Merritton, Ont., and Toronto, has sent to the printing trade a folder exhibiting the Red Seal coated book paper the mills are offering for the consideration of printers who need a good coated book for the production of business literature. The claim is that this paper is peculiarly adopted for fine-screen halftone work, that it has a substantial body and is uniform in bulk, and that its use is economical for large editions of catalogues, broadsides, booklets and other forms of commercial literature.

T. A. Weldon, vice-president of Provincial Paper, Ltd., has returned to Toronto after a business trip to Ottawa and Montreal.

George Carruthers, president of the Interlake Tissue Mills, Ltd., head office Toronto and mill at Thorold, Ont., sailed a few days ago on the *Laurentic* from Montreal to Liverpool. Mr. Carruthers was accompanied by his wife and daughter. The itinerary will include visits to Scotland, the English Lake district, Holland, the Rhine Valley, Oberammagau, Pisa, Genoa, Rome, Florence, Venice and other centers of interest on the Continent. This is Mr. Carruthers' first real holiday in some years.

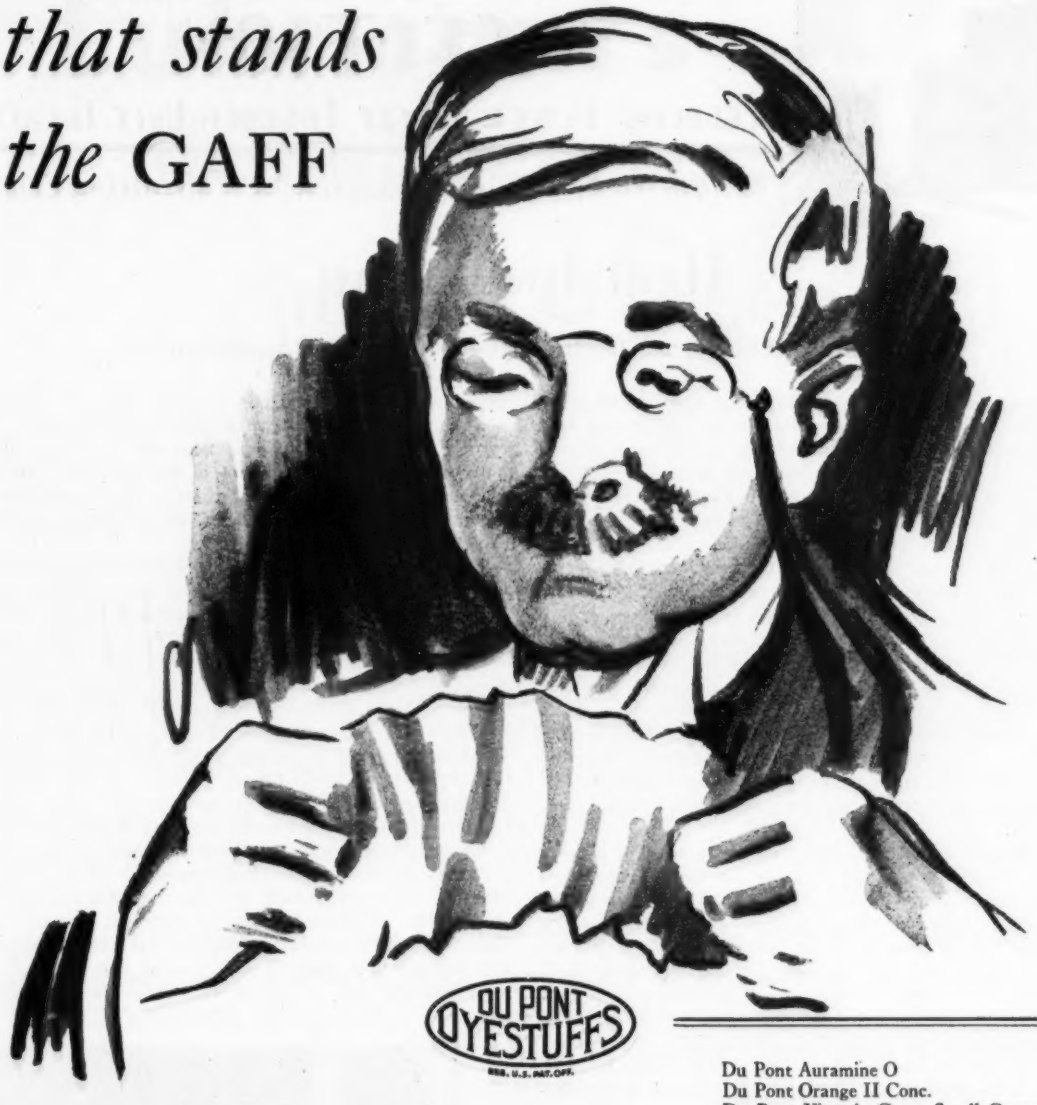
Employees of Alliance Paper Mills in the Niagara Peninsula held their annual picnic at Queenston Heights a few days ago when a full day's program of sports and other entertainment was indulged in to the delight of several hundred merrymakers. Among the executives present were George W. Pauline, managing director; L. E. Fleck, assistant managing director, and G. C. Winlow, director and sales manager.

A provincial charter has been granted the Galt Paper Box Company, Ltd., with an authorized capital of $40,000 to carry on the business of manufacturing, importing and dealing in all kinds of paper and paper boxes. Among the incorporators are George Hancock and Ernest V. Brown, of Galt.

A party of 165 newspaper men, editors and owners recently arrived at Duluth and Fort William, headed by E. W. Backus, of the Backus-Brooks Company. During a ten days' visit they spent part of the time inspecting the Great Lakes Paper Company, after which they enjoyed cruising on the Lake for several days, visiting Silver Island, Ste. Ignace Island and other spots, fishing on the Nipigon River and adjoining streams. Two planes were used to convey the visitors to and from distant points.

Calender Coloring

that stands the GAFF



WE recommend du Pont dyestuffs for calender coloring *only* after our Research Department puts them through exhaustive tests. The solubility, tinctorial power and penetrating qualities are *predetermined* in order that these dyestuffs will give complete satisfaction under actual mill conditions.

The du Pont line of paper dyes includes only those dyestuffs which give best results under the specific conditions they must face. The du Pont method of testing eliminates guesswork.

Our technical men have the equipment and experience to render immediate and efficient service. Put your dyeing problems in their hands.

Du Pont Auramine O
Du Pont Orange II Conc.
Du Pont Victoria Green Small Crystals
Du Pont Safranine T Extra
Du Pont Rhodamine B Pontacyl Green B
Du Pont Tartrazine O
Du Pont Methylene Blue ZX
Du Pont Methyl Violet NE
Du Pont Quinoline Yellow Conc.
Du Pont Crocein Scarlet N Extra
Du Pont Metanil Yellow Conc.
Pontacyl Fast Blue R
Pontacyl Blue Black SX
Pontacyl Black BX
Pontacyl Fast Violet 10B
Pontacyl Brilliant Blue A
Pontacyl Brilliant Blue E
Pontacyl Violet 4BL Pontacyl Carmine 2G
Du Pont Naphthol Green B Conc.
Pontacyl Green NV Conc.

E. I. DU PONT DE NEMOURS & COMPANY, INCORPORATED, DYESTUFFS DEPARTMENT, WILMINGTON, DELAWARE

POWER PLANT SECTION

REDUCING POWER COSTS THROUGH UNIT TREATMENT

Conducted by Reginald Trautschold Consulting Engineer

Heat Insulation

Thermal Inefficiencies Costlier Than Mechanical Inefficiencies

There are greater and more attractive opportunities of profit taking in pulp and paper mill operation through decreasing heat wastage, as a rule, than through increasing the efficiency of heat utilization. In other words, thermal inefficiencies are almost always more expensive than mechanical inefficiencies and, within certain limits, it is the thermal losses which can be the more easily and cheaply circumvented or curtailed.

It is not always easy to dissociate the two losses, it is true, but if this can be done it will usually be found that the return upon an investment effecting a reduction in heat losses is very apt to be much greater than that upon an investment of like amount effecting an increase in efficiency of heat utilization. The need of minimizing heat losses so far as possible increases with elevation in temperature conditions and, consequently, the importance of effecting adequate and proper heat insulation becomes a matter of ever growing concern as steam pressures and temperatures are elevated in the power plant, in the interests of economy and greater efficiency in power unit operation and thermal processes.

Improvements in one direction may appear to aggravate losses in the other, seemingly creating a vicious circle resisting the attainment of major improvements. In a sense, this may be so, but at the same time the curtailment of heat losses, entailing adequate and proper heat insulation, makes it possible to consummate and capitalize upon substantial betterments in mechanical efficiencies. It is well to stress this point, that proper heat insulation not only reduces heat wastage, but actually consummates improvements in mechanical efficiencies. The relative influences of the respective effects upon reductions in mills' operating costs vary greatly, of course, but approved and advanced insulation practices should be appraised, nevertheless, from the compound viewpoint of minimizing heat wastage and bettering efficiency in heat utilization.

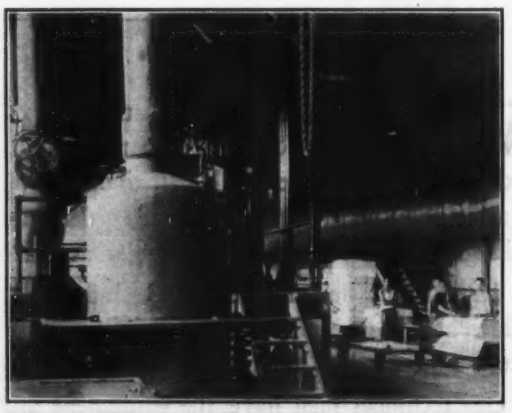
With two prime, variable factors, influencing the appraisal of heat insulation, the question becomes quite involved, but there is no need for an analytical treatise upon heat insulation to demonstrate the value of arresting all preventable escape of expensively developed heat or of utilizing such heat to the best possible advantage. A better plan is to outline briefly some of the recommendations looked upon with favor at the present time as to when, where and how to insulate. Before doing so, however, it might be well to touch upon the basic laws of heat transference in a few words, since some appreciation of such rules is essential for a clear understanding of why the insulation should be provided.

Transmission of Heat

There are three distinct ways by which heat may be propagated or conveyed from one place tot another; by conduction, radiation and convection. For example, the loss of heat from a furnace wall entails conduction through the furnace wall to its outer surface and the emission of the heat from the outer surface to the adjacent air by radiation, the latter process being accelerated by convection due to air movement on the outside of the wall.

The quantity of heat transmitted by conduction through the wall varies directly with the area of the wall, the temperature difference between the inner and outer surfaces, the thermal conductivity of the materials composing the wall and inversely with the thickness of the wall. The rate of heat emission from the outer surface is influenced chiefly by the surface temperature, the temperature differential between the outer wall surface and the adjacent air and by the rate of air circulation. Physical characteristics and properties of the wall surface are contributory influences in lesser degree.

Radiation losses mount very more rapidly with a rise in temperature, being, for instance, around 100 Btu per square foot, per hour, at a wall temperature of 100 degrees Fahrenheit, under still air conditions, and approximately 1,700 Btu per hour at 500 degrees, under similar still air conditions. Any air movement serves to accelerate sharply the heat loss by convection, however, and with an air velocity of 400 feet per minute, which corresponds to a wind velocity of only 4½ miles an hour, the heat loss per square foot of wall surface at a temperature of



Courtesy: Johns-Manville

FIG. 1.

Well insulated steam turbine in machine room of western pulp and paper mill.

Lubricants that will turn losses into Profits

THE money saved through the use of the highest quality lubricants designed expressly for the work to which they may be applied, more than pays the cost. Effective lubrication often turns unsuspected losses into very satisfactory operating profits.

Conditions in the paper industry today demand close attention to production costs. Big things are being accomplished — but there is still much that can be done.

Paper mill lubrication is one of the promising fields for study. The executive who will undertake a thorough investigation of lubrication practices within the plant is assured of results. Texaco engineers will gladly cooperate in this investigation. Their close contact with the industry and wide experience in overcoming all sorts of lubricating difficulties enable them to render the highest type of profitable lubrication service. And there is a Texaco Lubricant for every purpose. Write The Texas Company first.

TEXACO

THE TEXAS COMPANY
135 East 42nd Street, New York City

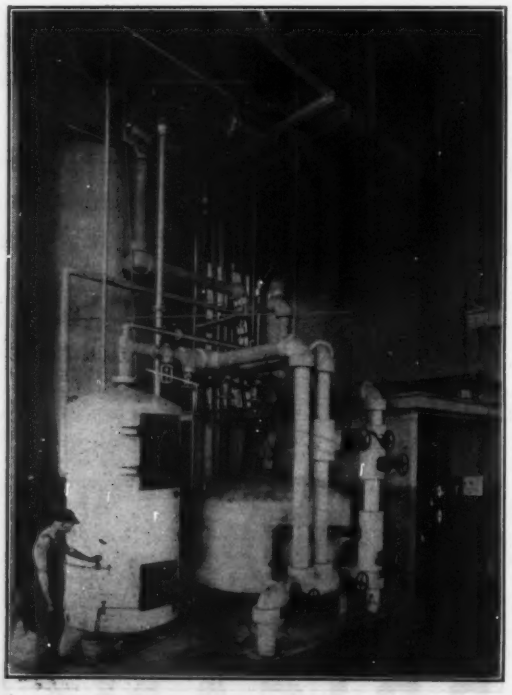
LUBRICANTS

500 degrees reaches 2,660 Btu per hour, or more, an increase of between 50 and 60 per cent. At higher air velocities, the increase is greater and more rapid.

The complications thus introduced by the transmission of heat by convection are apt to be perplexing and even misleading, for the temperature of the outer surface of a heated wall exposed to moving air will be lower than if the air is still and yet the heat loss will be greater. The wall temperature apparently indicates less heat loss, being lowered, but in reality the emission of heat is more rapid and the loss greater. This is because the heat flow by conduction through the wall increases in approximately direct proportion to the temperature difference between the inner and outer wall surfaces and, as the emitted heat is rapidly withdrawn by the moving air by convection, lowering the outer wall surface temperature, the temperature differential through the wall is increased and more rapid, consequently, becomes the heat flow by conduction.

A practical exposition of the complications introduced by convection which has had a marked effect upon modern insulating practices is in connection with so-called "dead air spaces" formerly built into the walls of boilers with the view of reducing heat losses. Air being a poor conductor of heat, it was held that such provisions should prevent or reduce the loss of heat through the walls of the boiler. At high furnace temperatures, this has now been found to be erroneous, the air spaces actually aggravating heat losses, since the hot surfaces of the air spaces radiate heat so rapidly that a greater amount is lost across the space by radiation than would be conducted through a solid wall.

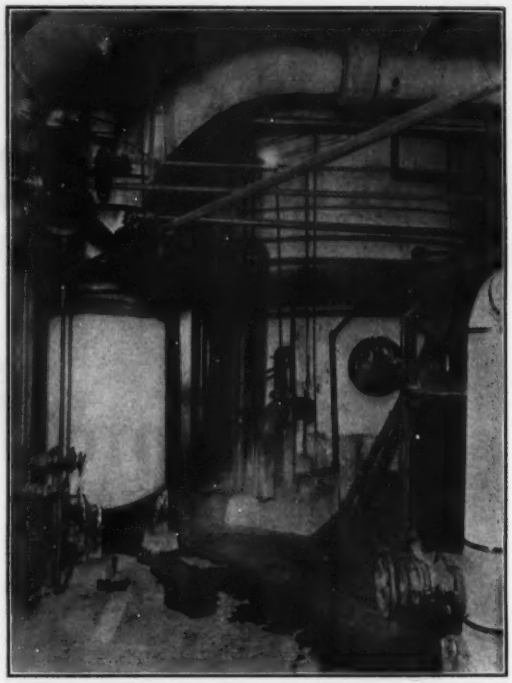
The reason for this situation is that while the conduction of heat through a solid wall depends upon the difference between the temperatures of the two limiting wall surfaces, the flow being directly proportional to such difference, the quantity of heat that passes across the air space in the wall depends on the difference between the fourth powers of the absolute temperatures of the surfaces enclosing the air space. In addition to this intense radiation through air at high temperatures, there is also rapid convection of heat to be contended with. The average velocity of the air molecules at a temperature of 1,100 degrees Fahrenheit for example, is approximately 3,600 miles an hour, so that under conditions of high temperature the air spaces became exceedingly active and pronounced convection currents develop.



Courtesy: Johns-Manville.

FIG. 2

Example of a properly insulated turbine room of a prominent paper mill.



Courtesy: Johns-Manville.

FIG. 3.

400-pound steam separator covered with 3-inch magnesia blocks with ½ inch asbestos cement finish. Piping is also covered with 3-inch sectional magnesia insulation, broken joint construction.

Modern Insulation Materials

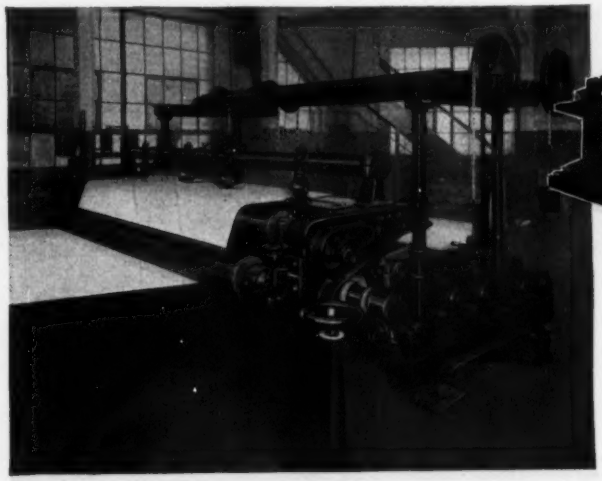
Radiation across confined spaces and convection currents in such cells have also to be reckoned with in other phases of high temperature insulation practices, for such phenomena exert much influence upon the success with which heat losses may be controlled. In fact, it is an appreciation and understanding of the laws of heat transference by radiation and convection which distinguishes much of the recent progress in approved methods of heat insulation and even in respect to the characteristics of modern approvel insulation materials.

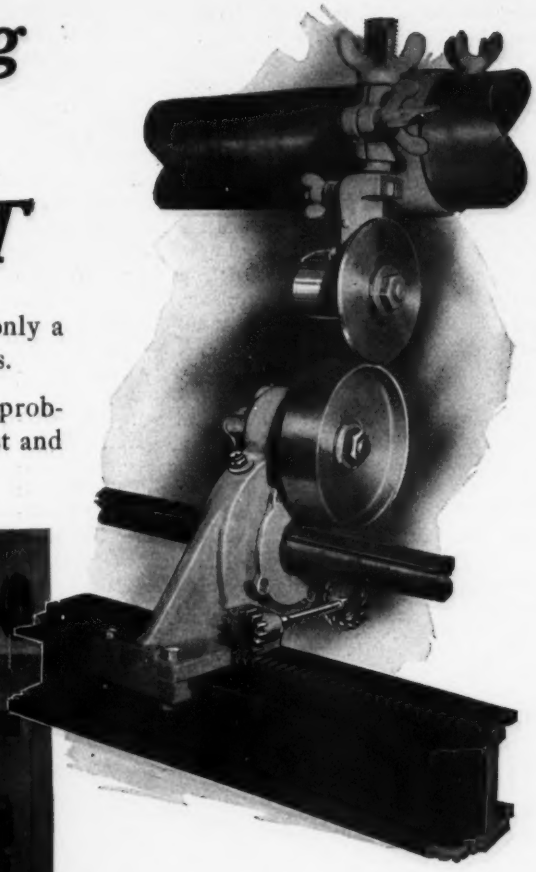
Ordinarily, a material having a low apparent density is considered a good insulator and where only low or moderate temperatures are concerned the insulating properties of most such materials doubtless suffice. Many of these materials contain, however, numerous voids, or cells of relatively large size filled with air and in high temperature insulation there is grave danger of these voids being too large and of having radiation across the spaces and convection currents developed in the cells, a situation which discounts and may even destroy the insulation capacity of the materials for high temperature conditions. Nevertheless, for a material to be effective as an insulating medium at high temperature it must possess marked porosity, but with the individual pores so small that heat radiation within the material will be very limited. If the pores, or cells, are large enough to be noted by the naked eye, they are now held large enough to be instruments of heat transfer by radiation and convection at the temperatures common in modern power plant practice, and the larger the voids, the more rapid is the increase in apparent heat conductivity at elevated temperatures.

Cleaner Slitting at LOWER COST

To do a perfect job of shear-cut slitting is only a matter of having keen-edged, true-running blades.

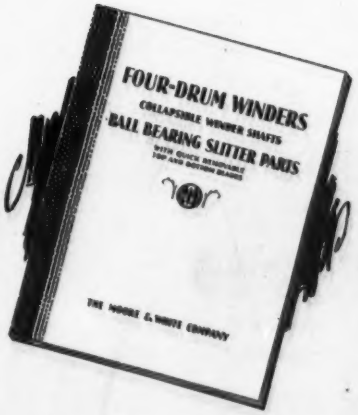
In the new M & W Ball Bearing Slitter the problem of blade maintenance is solved in the simplest and most effective manner.





Instead of mounting the bottom blades on the main shaft and holding them by set screws, they are mounted on short independent shafts, gear-driven from the main shaft. That permits quick replacement of blades at the first sign of dullness.

The short shafts which carry both top and bottom blades are rigidly mounted in ball bearings. That eliminates wabble and vibration. The blades run *true*.

With blade nicks and wabble abolished, and slitter cracks taken out of the picture, slitting becomes the *dependable, low-cost operation* it ought to be.

You will have to learn the whole story. Shall we send the Bulletin?

THE MOORE & WHITE COMPANY
Established 1885
15th ST. & LEHIGH AVE. PHILADELPHIA, PA.

While there are many materials which are suitable for insulation in the lower temperature ranges, in the high temperature field the insulating material must not only have low conductivity and, consequently, possess marked porosity, but must also have a high degree of refractoriness, a quality not always found in insulating materials. These restrictions sharply limit, naturally the varieties and classes of materials suitable for high temperature insulation, such as required for controlling heat losses in the modern paper mill power plant, and without attempting any classification or analytical study of insulating materials it may be stated that approved and highly efficacious insulating requirements in the mills and power plants of the paper making industry, can be obtained from four basic minerals; asbestos, magnesium carbonate, diatomaceous silica and argillaceous limestone. The familiar rock wool is made from the latter mineral.

Made from these minerals, alone or bonded together, sometimes with the addition of Portland cement or other material, insulation well suited for all present general and specific requirements can now be secured in the forms of sectional pipe coverings; insulating sheets, blocks, brick and blankets; insulating cements, fillers and finishes; insulating paper and felts; and with Portland cement as a light weight aggregate for making insulating concrete. There may be still other important forms in which the insulations may be obtained, but these as well as a subdivision of the various forms into classes, etc., can be better presented by mentioning briefly a few of the specific applications in power plant and mill which have demonstrated their value by money saving service records.

Insulation Applications in the Power Plant

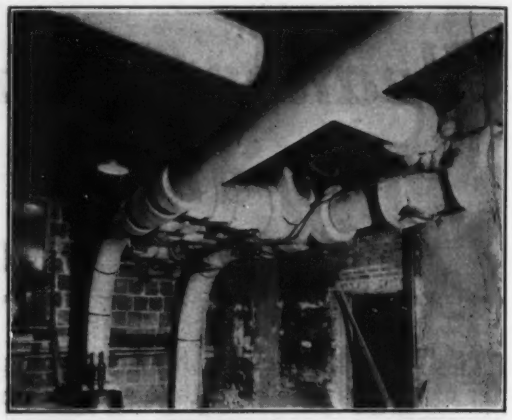
The boiler furnace being customarily the source of all heat, the proper insulation of the boiler commends first consideration, particularly as it is where the highest temperatures pertain that the wastage of heat is apt to be more costly. The furnace setting, moreover, is simply a container for the combustion of the fuel and the more thermally efficient the container can be made, the greater will be the capacity of the furnace and the lower the fuel consumption. Another reason for featuring the insulation of the boiler in particular is that with the elevation in boiler steam pressures and temperatures, rates of fuel combustion and furnace temperatures have advanced and with the advance in steaming rates there have of necessity been marked changes in boiler settings and in the use of refractories[1]. Comparatively thin shells of high temperature refractories have replaced massive thicknesses of brick which under former conditions of boiler operations at low and moderate pressures, etc.,

[1] See "Refractory Protections," Paper Trade Journal, June 12, 1930.

Courtesy: Johns-Manville

FIG. 4.

Water softening system covered with 1½-inch 85 per cent magnesia blocks and ½-inch asbestos cement.



Courtesy: Johns-Manville

FIG. 5.

Low pressure steam lines to engines protected by 1½-inch 85 per cent magnesia covering.

were counted upon to keep heat losses within reasonable limits, and, consequently, the need of proper boiler insulation has become a much more important consideration than formerly.

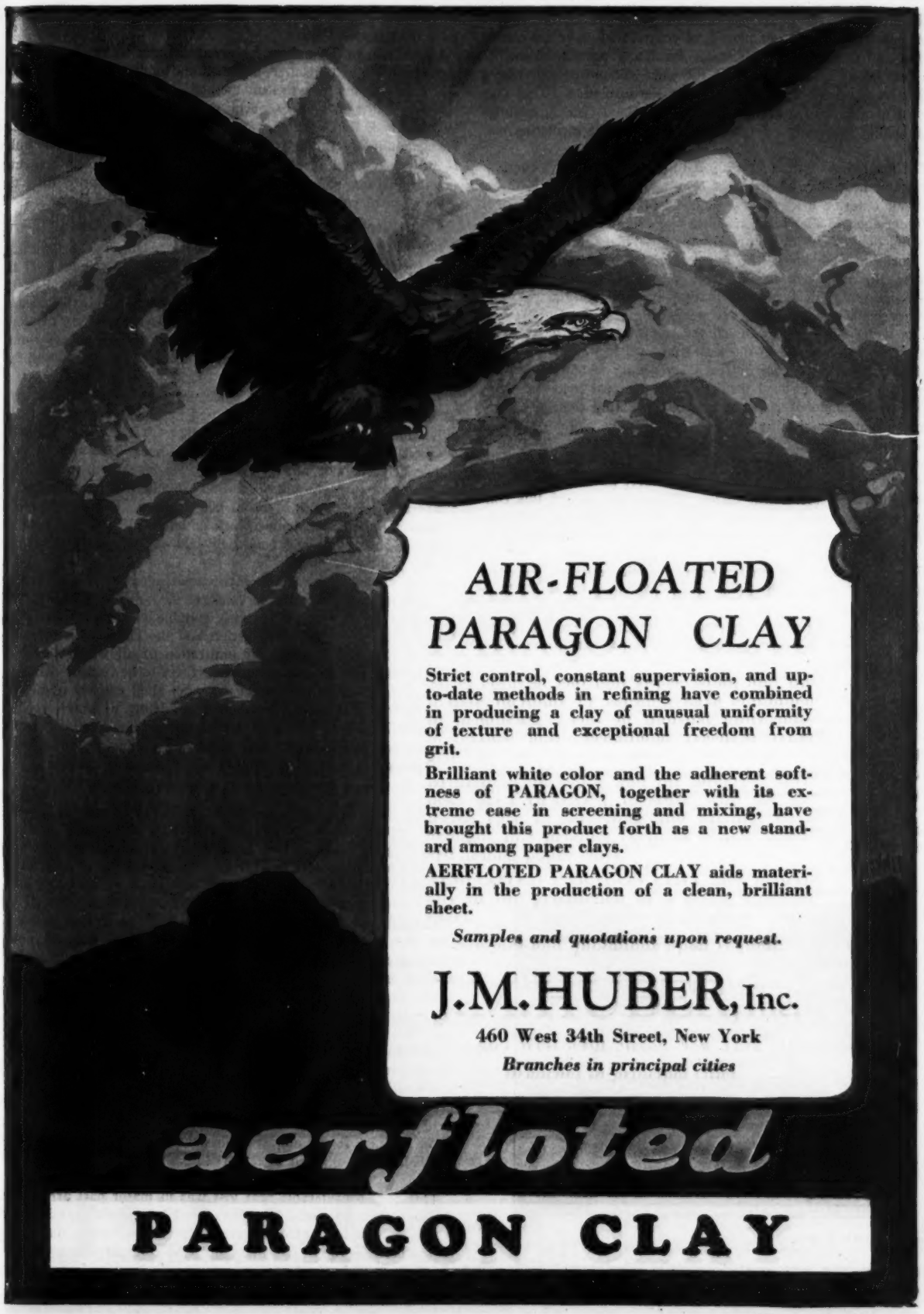
To illustrate, if the heat from an uninsulated, 2,400 degree furnace with 18-inch firebrick walls is valued at no more than 50 cents per million Btu, the monetary equivalent of the heat loss amounts to $3.38 per square foot, per year. Properly insulating the furnace walls with 3-inch blocks of diatomaceous silica and asbestos fibre bonded together in correct proportions will reduce such loss to $1.51, saving $1.87 per square foot of wall per year. Under such conditions, the investment entailed would be liquidated well within the year and the heat losses reduced by more than 55 per cent.

Such conservation of heat would quite obviously effect a desirable reduction in the annual coal bill and, in addition, the insulation reduces the temperature gradient through the refractories, lowering the temperature differential between the two faces of the firebrick and thereby lessening internal strains and the spalling of brickwork. The more uniform temperature throughout the firebrick wall would also reduce the tendency of the wall to crack under expansion and contraction stresses. Finally, the insulation, if properly applied, would tend to seal cracks in the furnace walls and prevent the infiltration of air, effecting improvements in furnace operation which might even prove more profitable than the saving in heat and reduction in fuel cost.

Insulation Applications to Boiler Settings

Three of the approved general methods of applying insulation to boiler settings are: the so-called block method, in which blocks of insulation are applied to all exterior brickwork on the furnace and side walls and on exposed brick sections of the rear wall in the path of gases containing useful heat, such blocks then being covered, or finished off, with a protective coating of hard sheets of insulating board or by a coating finish over the insulation of a suitable sealing cement; a veneer of insulating brick applied over either new or existing boiler settings, with or without finish coats of insulating cement; and the core wall construction, in which the insulating brick are built in as a "core" between the refractory and the outer brick wall.

An excellent insulation for application next to the exterior brickwork on the furnace and side walls in the block method of insulation is one composed of diatomaceous silica and asbestos fibre well bonded in suitable proportions. With some types of water-tube boilers, two layers of such blocks set in broken joint construction, closely laid and pointed up with a quality insulating cement, will suffice for insulation. In others, better results are secured if an inner layer of such blocks is applied and covered


AIR-FLOATED
PARAGON CLAY
Strict control, constant supervision, and up-to-date methods in refining have combined in producing a clay of unusual uniformity of texture and exceptional freedom from grit.
Brilliant white color and the adherent softness of PARAGON, together with its extreme ease in screening and mixing, have brought this product forth as a new standard among paper clays.
AERFLOTED PARAGON CLAY aids materially in the production of a clean, brilliant sheet.
Samples and quotations upon request.
J.M.HUBER, Inc.
460 West 34th Street, New York
Branches in principal cities
aerfloted
PARAGON CLAY

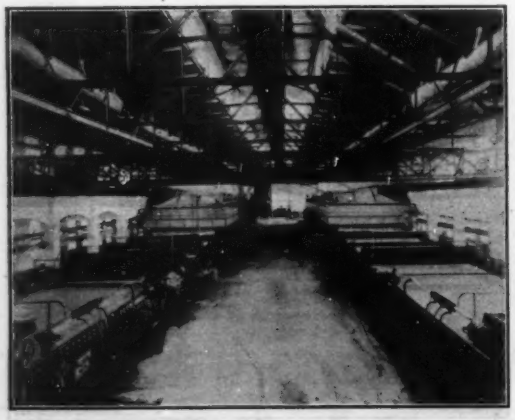
with an outer layer of 85 per cent. magnesia blocks, the broken joint construction being employed, of course, and all joints closely butted and pointed with a suitable insulating cement. Whether the two layers of blocks are of the same composition or not, a protective shell should be applied over the insulation. This may consist of sheets of asbestos fiber and Portland cement, coatings of a quality insulating cement or of other suitable insulating material.

The insulation of the rear wall, if in the path of gasses containing usable heat, may be of 85 per cent. magnesia blocks laid direct over all exterior brickwork or a layer of such blocks laid over an inner shell of diatomaceous silica and asbestos fiber blocks, depending upon the temperature situation. When the two varieties of blocks are employed, the inner layer of insulation serves to protect the magnesia blocks from excessive temperatures. A protective outer finish, similar to that specified for the side and furnace walls, is also to be recommended.

The boiler top calls for much the same insulation as the rear wall, when the latter is in the path of useful heat, and is usually protected by a finish coat or two of a quality insulating cement. For drum and drum-head insulation, 85 per cent. magnesia protected by a couple of coats of a good insulating cement usually proves adequate and quite satisfactory. For the boiler tube door lining, an insulating concrete composed of a rich mixture of a coarse granular form of calcined diatomaceous silica rock with Portland cement, when it can be used, proves an excellent protection against excessive heat losses. Where the use of this concrete is not practical, the tube doors may be quite satisfactorily lined with a resilient blanket of felted asbestos fiber, protected on the exposed side with a suitable insulating millboard.

For insulating brick veneer on new boiler settings, excellent results are reported with the outer, or insulating, course of brick constructed of a calcined, semi-refractory type of diatomaceous silica, insulating brick laid up with the firebrick. Ordinarily, no protective finish is necessary with such brick, but if a positive air seal is desired the outer surface may be primed and finished off with weatherproof coatings of an insulating compound. For the brick veneer insulation of existing settings, a brick cut from pure diatomaceous silica rock proves very satisfactory, such brick being laid up tightly against the existing brickwork and protected with a couple of coats of high grade insulating cement.

In core wall insulation construction, which, incidentally, is customarily restricted to water-tube boilers, of 500-horsepower or less and to return tubular boiler settings, diatomaceous silica brick proves very successful. In the furnace and first pass of water-tube boilers and in sections of return tubular boilers where the service is particularly severe, it is customary to employ calcined brick and on the remainder of the setting a brick cut from pure diatomaceous silica.



Courtesy: Johns-Manville.

FIG. 6.

Two 234-inch, high speed, news print machines in prominent Canadian mill equipped with paper machine hoods, in service three years.

In addition to these three approved methods of insulating boiler settings, there is, of course, a fourth and under certain conditions and requirements an excellent method, which may be termed the "plaster method." An excellent insulation for use when so insulating is a tough, rubbery asphaltic-asbestos coating in plastic form, admirably suited for covering the outside of boiler walls. It proves a good insulator and, also, its marked adhesive and ductile qualities make it particularly efficacious in preventing the infiltration of cold, exterior air into the combustion charmber.

Water and Air Cooled Boiler Wall Insulation

In the insulation of water wall constructions, an excellent method is to apply first a filler coat of insulating cement over the metal work to provide a level surface for the application of the insulation, then to build up two layers of insulating blocks and finally to encase the insulation with removable panels of dense sheets of asbestos fiber and Portland cement combined under heavy pressure. If the temperature encountered is not unduly high, the two layers of insulating blocks may very well be of 85 per cent. magnesia, but if over 600 degrees Fahrenheit, the first, or inner, layer is preferably composed of blocks of dicatomaceous silica and asbestos fiber bonded together. These combination insulation blocks, which will resist temperatures up to 1,600 degrees Fahrenheit, serve to protect the magnesia insulation, which, while an excellent and efficient insulation, should not be subjected to temperatures in excess of about 600 degrees. The two layers of insulation, whether a similar block or blocks of different heat resisting capacities, should be closely laid, of course, employng the broken joint construction.

In air cooled boiler wall constructions, adequate and proper insulation is highly essential to conserve so far as possible the heat recovered by the air, to furnish suitable clearance for the air travel with ample scrubbing action and the elimination of undue friction loss, and to resist the infiltration of air which would interfere with the air flow over the surfaces to be cooled. The customary construction is to build the outer shell entirely of insulating materials, an approved erection consisting of outer, replaceable panels of stiff sheets of asbestos fiber and Portland cement boards, an inner lining of hard insulating millboard and an intermediate layer, or blanket, of resistant, felted asbestos fiber.

An Achievement in Boiler Insulation

While these more or less definite recommendations for effective boiler insulation are quite representative of approved practices in combating the insidious heat losses from the steam generator some noteworthy results have been secured by quite different applications of insulation. One such is at a northern plant where a low grade lignite coal, running 6,300 Btu per pound and containing 37 per cent. moisture, is the plant fuel and local conditions are such that the boiler, a 500-horsepower unit designed for 250 pound steam pressure at a total steam temperature of 650 degrees Fahrenheit, is operated almost continuously at 400 per cent. of rating.

The design of the boiler furnace is such as to prohibit the utilizing of any water cooling and it is essential to maintain very high side wall temperatures in order to effect and sustain ignition of the fuel. The furnace is stoker fired and supplied with preheated air at a temperature of between 400 and 450 degrees. This combination of conditions and limitations entailed, prior to the present insulation of the boiler, radiation losses running as high as 3 to 4 per cent. of the total heat liberated in the boiler furnace. In fact, it was almost impossible to hold one's hand against the boiler, the exposed brickwork attaining such a high temperature.

This very considerable heat loss was in major part arrested by the insulation applied over all exposed brickwork encasing high temperature zones. That is, over all brickwork except that in the region between the intermediate and rear columns where the temperature zones in the boiler are comparatively quite low. The in-

From Cars to Fire Box and Return

via **Jeffrey Coal and Ashes Handling Equipment. From the time the coal car is spotted on the siding until the ashes are hauled away, Jeffrey Coal and Ashes Handling Equipment performs its task efficiently and economically, regardless of tonnage.**

No single type of unit can be successfully adapted to every plant, because each installation presents its own particular problems. For this reason Jeffrey makes many types of coal and ashes handling equipment—the result of practical experience gained in hundreds of installations covering more than half a century. And that is why Jeffrey engineers are free to tackle each coal and ashes handling problem *impartially* and submit recommendations for the type of equipment best suited for that particular plant.

The benefit of this cumulative experience is at your disposal—without obligation—to assist you in planning new or replacement equipment. Please get in touch with the district office nearest you, or you may use the coupon at the left for additional data on any type of Jeffrey Coal and Ashes Handling Equipment.

The Jeffrey Manufacturing Company

931-99 North Fourth St., Columbus, Ohio

New York	Philadelphia	Cincinnati	Charleston, W. Va.	Salt Lake City	
Buffalo	Pittsburgh	Cleveland	Milwaukee	Birmingham	
Utica	Scranton, Pa.	Detroit	St. Louis	Houston	
Rochester, N. Y.	Boston	Chicago	Denver		

Jeffrey Manufacturing Company, Ltd., of Canada. Head Office and Works, Montreal. Branch Office, Toronto

JEFFREY
MATERIAL HANDLING EQUIPMENT

Literature on Jeffrey Coal and Ashes Handling Equipment

Pivoted Bucket Carriers

Handle both coal and ashes, doing the work of at least one elevator and two conveyors. This type of conveyor will handle 50 tons or more per hour. Chain is of double-bushed construction. The replacement of bushings provides practically a new chain. No through rods to impede loading or dumping of buckets. Catalog No. 210-Z.

V-Bucket Conveyors

A combination elevator and scraper conveyor. Used where height of elevating unit is limited. The V-Bucket will handle material beyond the range of an ordinary Bucket Elevator. Catalog No. 465-W.

Belt Conveyors

Work on incline as well as horizontal. Coal is handled with little or no breakage. Jeffrey three and five-pulley troughing carriers have recessed grease pockets providing positive lubrication at all times. Tripper discharges load at any point. Catalog No. 409-R.

Spiral Conveyors

Have no return strand. Can be installed in a minimum of space and can be fully enclosed for dusty or fine materials. Fed at any point along its length and discharged at the end or at any intermediate point through welded steel chutes. Catalog No. 398-X.

Scraper Conveyors

Operate horizontally, on incline or combination of both. The scrapers travel in a metal trough and push the coal before them. Coal is fed at any point and discharged at the end or through gate-controlled openings along trough bottom. For moderate sized or small plant. Catalog No. 257-T.

Drag Chain Conveyors

Are made of hard and rough malleable iron for handling ashes at low cost. Operate in cast iron trough, capacity 20 tons per hour. Located under boilers, in basement, or below floor level in front of boilers. Catalog No. 480-E.

Skip Hoists

Best and most satisfactory equipment for handling ashes from boiler house to storage bin where it is desired to keep ash handling independent of coal handling. Designed to serve any type of bin. Either vertical or inclined runway. Automatic and needs little attention. Catalog No. 271-F.

Apron Feeders

Steel Apron Conveyors, operating on an incline are particularly adapted as feeders from track hoppers to crushers or other conveying units when it is necessary to limit depth of pit. The apron conveyor forms a practically leak-proof moving trough. Catalog No. 435-T.

Reciprocating Plate Feeders

Regulate the flow of material from track hopper to crusher. Best when conditions permit placing elevator close to railroad tracks, or passing a conveyor under tracks. Data Sheet A.

Weigh Larries

The Traveling Larry is used to distribute coal from bunkers to stoker magazines. Accurate weight and a record of all coal delivered to each boiler can be kept. Operated from floor or cab. Hand or motor propelled. Data Sheet B.

Crushers

Single Roll Crushers reduce run-of-mine coal to stoker size in a single operation. The Jeffrey Double Roll Crusher reduces coal and coke to ½" and finer. The Rigid Hammer Crusher is used when a uniform product 1" to ½" is desired. with a minimum of fines. Catalog No. 359-H.

USE THIS CONVENIENT FORM WHEN ORDERING CATALOGS

THE JEFFREY MANUFACTURING CO.
931 N. Fourth St., Columbus, Ohio
Please send me the following Catalogs

Indicate by number _____

Name _____

Company _____

Street Address _____

City and State _____

sulation material effecting the marked improvement is rock wool, made from argillaceous limestone, in the form of blankets with reinforcements of galvanized iron on one side and expanded metal on the other. This insulation was anchored firmly to the brickwork and protected with finishing coats of insulating cement. So effective has this insulation proved, that now when the boilers are driven at 400 per cent. of rating the temperature at the surface of the insulation very rarely exceeds 110 degrees Fahrenheit.

Curtailing Heat Losses From Breechings and Ducts

Essential as it is to conserve all possible useful heat at the steam generator and cut down boiler radiation losses, a very considerable proportion of the heat liberated in the boiler furnace must pass to the breechings and stack. Consequently, the proper insulation of smoke flues, breechings and ducts affords one of the most profitable opportunities of employing insulation. Metal ducts can be protected from corrosion, draft can be improved, excessive room temperature avoided and the boiler room crew protected from dangers of burns due to accidental contact with highly heated metal surfaces. If economizers or air heaters are employed, the sustained temperature heat of the flue gases increases the effectiveness of heat recovery.

Effective insulation of breechings and ducts, both internal and external, can be accomplished in various ways, of course, as in the insulation of boilers, so the following brief comments concerning specific methods of application are not to be interpreted as recommendations so much as simply illustrations of means of saving substantial sums in the net cost of operating the power plant.

For the interior insulation of breechings and ducts, linings of 2-inch blocks made of a combination of diatomaceous silica and asbestos fiber bonded together or of 2½-inch blocks cut from pure diatomaceous silica rock give excellent insulation under thermal conditions up to 1,000 degrees Fahrenheit, blocks of the former compounded material actually resisting temperatures up to 2,000 degrees and those of the natural mineral temperature up to 1,600 degrees. The blocks are anchored in place and protected with a couple of coats of a semi-refractory insulating cement possessing marked resistance to the erosive action of hot gases.

Suitable exterior insulation of breechings and ducts, insulation capable of well withstanding 600 degrees of heat, is secured with 85 per cent. magnesia blocks or blocks composed of diatomaceous silica bonded with asbestos fiber applied over an air space formed by projecting stiffeners and also with such blocks applied directly to the outside of breechings and ducts without interposed air space. Whether or not an air space is employed, the insulation blocks should be protected by a couple of coats of asbestos insulating cement applied over galvanized wire netting.

The lining of steel stacks with insulation has also been found to be both profitable and advisable. A very good lining, one which will resist temperature of 1,600 degrees, consists of 2½ inches of brick cut from pure diatomaceous silica rock, or for higher temperatures, one of calcined diatomaceous silica brick. Circumferential angles placed in the stack usually provide the needed support for the brick which are bonded to the cleaned stack inner surface with a fibrous adhesive and protected from the hot flue gases by coatings of semi-refractory insulating cement applied over suitable wire netting. Where stack temperatures are not so high, *i.e.*, below 700 degrees, satisfactory linings are made of sheets, 2 inches thick, of vitrified asbestos felts corrugated to form a cellular structure. When using such material, however, care should be taken to seal the upper rim of the lining against the entrance of moisture, a common method being to provide an angle ring continuously welded to the steel stack at the top of the chimney.

Insulation of Turbines and Auxiliaries

Important as it is to arrest the escape of useful heat from the boiler battery and to make all possible use of the flue heat, it is just about as essential to combat heat losses from power units, feed-water heaters, pump cylinders and chests and all other auxiliary equipment in the power plant. As a rule, only simple insulation problems are entailed, but it is very necessary to make a wise selection in respect to the insulations employed, in order to derive the full benefits from the investments entailed.

For example, while the adequate and proper insulation of steam turbines is obviously desirable and it can be readily appreciated that the metal surfaces of both the upper and lower shell, the entire casing in fact, inlet pipe, bodies of controlling and throttle valves and the flanges between such valves and all exposed metal between the controlling valves and the turbine shell should be protected by insulation, the question of steam temperature commands consideration in selecting the insulation.

If the steam temperature is 600 degrees or more, a layer, or course of brick of diatomaceous silica bonded with asbestos fiber, should be applied directly on the metal, after the surface irregularities are smoothed over with a quality asbestos insulating cement, and in turn covered with 85 per cent. magnesia insulation. A final exterior coat of asbestos insulating cement should then be applied, making in all a total insulation thickness of 3½ inches. Such a built up insulation proves an excellent and money making protection against heat losses. With the steam temperature between 400 and 600 degrees, however, 3 inches of insulation will suffice and 85 per cent. magnesia blocks alone, closely butted and sealed with asbestos insulating cement, will provide adequate protection. Again, if the steam temperature is less than 400 degrees, insulation with 85 per cent. magnesia, 1½ inches thick will prove satisfactory.

For the insulation of feed-water heaters, 85 per cent. magnesia, 1½ inches thick applied to all exposed surface, with a coating of a good insulating cement, is looked upon with favor. For the steam and hot water cylinders and chests of all pumps, similar insulation, but a little thicker, affords excellent thermal protection.

In all cases, the proper insulation is determined by the character of the demand. This applies to coverings for pipes and fittings as well, the insulation of which is highly important throughout both the power plant and the mill. In fact, wherever there is any loss of useful heat, insulation protection is desirable. It will pay almost invariably and often yield very handsome dividends upon the investment entailed. Furthermore, the direct savings effected can be readily appraised and measured, making it far easier to determine the wisdom of buying insulation protection than the purchase of almost any other betterment in mill or power plant operation. If the direct savings in heat suffice to liquidate the investment within a reasonable period, the indirect benefits which are invariably realized are certain to be most attractive.

Insulation Application in the Mill

Insulation applications in the mill proper, pulp or paper, should be given the same attention as those in the power plant. Pipe insulation and the thorough insulation of all equipment employed in thermal processes afford marked opportunities of cutting production costs and there are also numerous applications of insulation possible of distinctly "paper mill" character. Paper machine hoods, which have well demonstrated their value in hundreds of mills, represent a form of heat insulation with which all progressive mills are now pretty well familiar. The value of roof insulation, ending the evils of "roof-drip" as well as being effective in the control of atmospheric conditions within the mill, and of building insulation are being appreciated more and more. These questions and many other insulation applications in the mill can hardly be taken up in a necessarily limited and general discussion on heat insulation, but a fitting conclusion to the present paper will be a brief consideration of the worth of insulating some distinctive piece of essential mill equipment.

Such a piece of equipment employed in a well defined thermal process which well illustrates the value of heat insulation in

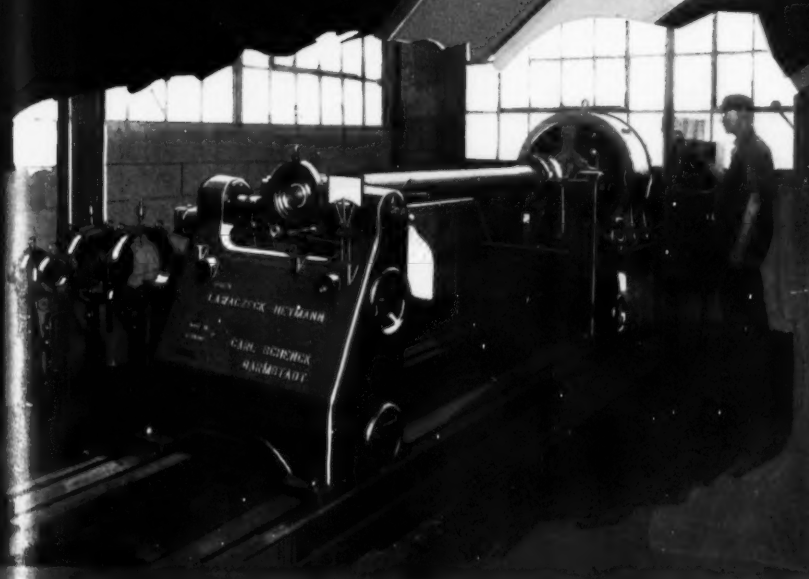
How BLACK-CLAWSON Did The Thing That Couldn't Be Done And Why They Did It . . .

AN out-of-balance roll pounds the bearings and gets out of level and out of line as the bearings give way. If it is a felt roll, the stretch of the felt becomes uneven, the whip too severe, and the life of the felt is shortened.

No, sir, your rolls are not in balance just because they have been balanced while standing still. Nine times out of ten they are far out of balance when running.

What of it? Just this. Black-Clawson balances their rolls both "still" and "running" at high speeds — have the only machine in the Industry capable of determining the balance of a roll while it is turning 1000 R. P. M. — the only machine able to do what everybody said couldn't be done.

SHARTLE



If interested, in longer bearing life and longer felt life, show some interest in how your rolls are balanced.

The April Messenger covers roll-balancing in fullest detail.

The Black-Clawson Co.

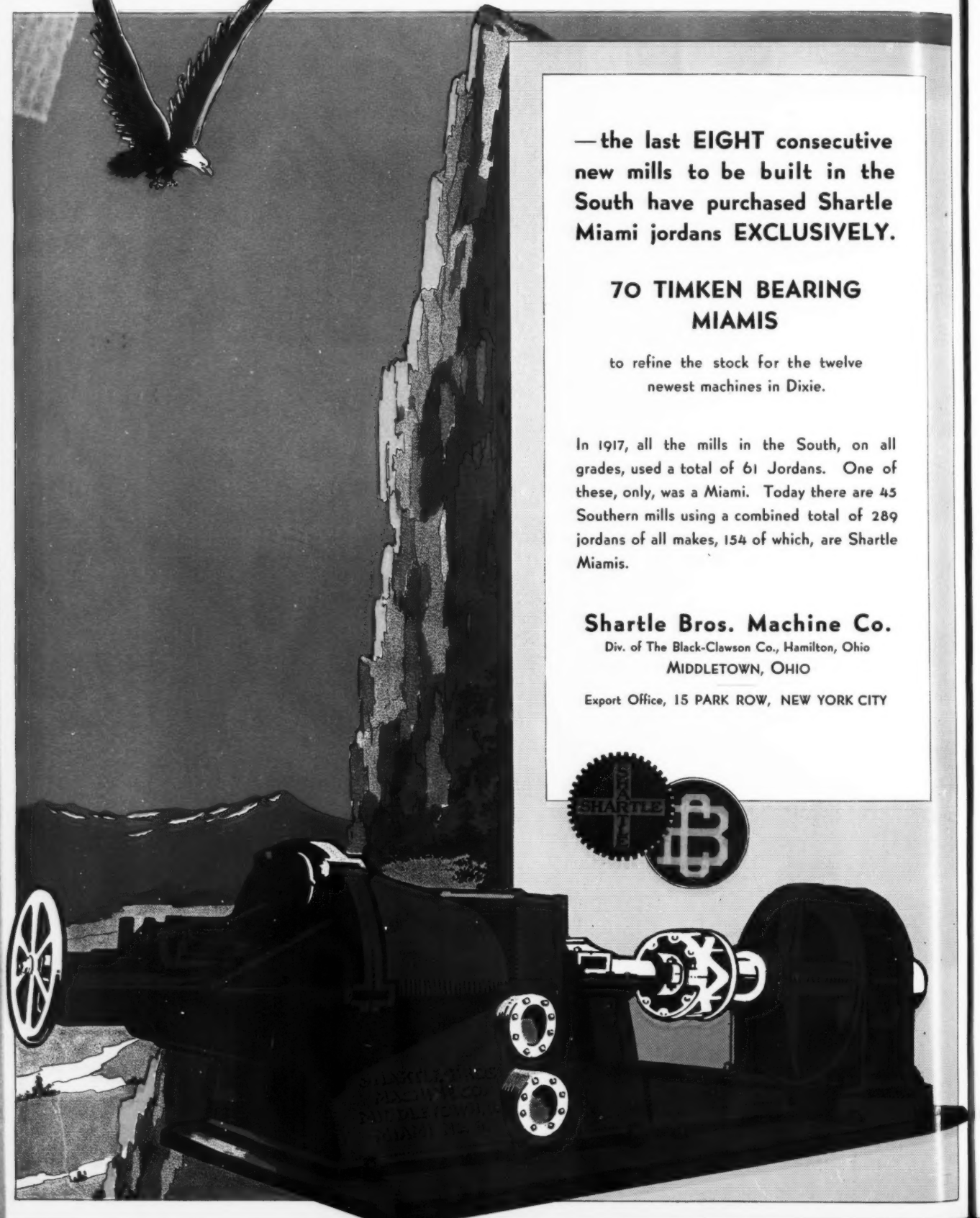
HAMILTON, OHIO

Operating Shartle Bros. Machine Co.
Middletown, Ohio

Export Office, 15 Park Row, New York

BALANCE

SOARING TO THE UPPER CRAGS OF ACCEPTANCE



—the last EIGHT consecutive new mills to be built in the South have purchased Shartle Miami jordans EXCLUSIVELY.

70 TIMKEN BEARING MIAMIS

to refine the stock for the twelve newest machines in Dixie.

In 1917, all the mills in the South, on all grades, used a total of 61 Jordans. One of these, only, was a Miami. Today there are 45 Southern mills using a combined total of 289 jordans of all makes, 154 of which, are Shartle Miamis.

Shartle Bros. Machine Co.
Div. of The Black-Clawson Co., Hamilton, Ohio
MIDDLETOWN, OHIO

Export Office, 15 PARK ROW, NEW YORK CITY

the mill and, at the same time, with which hundreds of mills have had experience is the rotary bleaching boiler utilized for cooking and bleaching the stock used in making boards, rayon, etc. These boilers average 14 feet in diameter, presenting some 585 square feet of surface which can be protected by suitable insulation against heat losses of considerable magnitude. The charge to be cooked is packed into a boiler, the cooking liquid added and the charge cooked with direct steam.

An investigation of a large number of installations places the average steam temperature in the boiler at 287 degrees, so, assuming the usual temperature of the room to be about 70 degrees under favorble conditions, there is a temperature differential between the boiler and the room of some 217 degrees. Consequently, if the boiler were not properly insulated there would be a heat loss of 597 Btu per square foot of boiler surface per hour, if there were no circulation of air about the boiler, and very much more if there was any air movement to accelerate convection. Assuming that the average heat loss during a customary cook of seven hours would be no greater, the escape of serviceable heat during the cook from an uninsulated boiler would amount to 3,505,215 Btu, or in weight of steam to 3,528 pounds. At 50 cents per thousand pounds, consequently, $4.25 would be wasted per cook from a bare boiler, or $1,326.00 annually per boiler, if half a dozen cooks are consummated weekly.

By properly insulating two such boilers by different methods, the heat loss has in each case been cut from 597 to 57 Btu per hour, per square foot of exposed boiler surface, a steam saving per cook for the boiler of 2,404 pounds. At 50 cents per thousand, this amounts to $1.20 per cook, or $374.40 per year per boiler on 312 cooks.

GARFUNKEL—IX.

The approximate cost of insulating the boiler by either method is $450.00 and the annual fixed charges, appraised at 25 per cent on a 5 year amortization, a matter of $113.00. A net yearly saving per boiler of $261.40 results, consequently, equivalent to an annual return upon the investment entailed in insulating the boiler of 58 per cent.

INSULATION OF ROTARY BLEACHING BOILER

Apparatus—14-ft. rotary (spherical) bleaching boiler.	
Boiler surface subject to insulation, sq. ft.	585
Steam temperature in boiler (assumed average), deg. F.	287
Room temperafure (assumed), deg. F.	70
Temperature differential between boiler and room, deg. F.	217
Heat loss, uninsulated boiler, Btu./sq. ft./hr.	597
Heat loss, insulated boiler, Btu./sq. ft./hr., Block method	57
Cement method	57
Heat saved by insulation, Btu./sq. ft./hr.	540
Heat saving per cook of 7 hrs., Btu./sq. ft./hr.	3780
Steam saving per cook, lbs./sq. ft.	4.11
Steam saving per cook per boiler (total), lbs.	2404
Steam cost ($0.50/M. lbs.) of saving per cook per boiler	$1.20
Annual saving due to insulation (based on 6 cooks/wk.)	$374.40
Approximate insulation cost per boiler (total)	$450.00
Gross annual saving per boiler	374.40
Anuual fixed charges (25 per cent based on 5 yr. amort.)	113.00
Net yearly saving per boiler	261.40
Net yearly return on investment, per cent	58

Johns-Manville.

The two methods of insulation providing the data for this appraisal of the value of the insulation, the application by both of which costs just about the same, are the so-called block and cement methods. The insulations employed and their applications are briefly as follows:

In the block method, the entire surface of the boiler, up to and around the trunnions and manholes, is covered with a single layer of 85 per cent magnesia blocks, 1½ inches thick, a coating over the blocks of asbestos cement, ¼ inch thick, and an outer protective layer of weatherproof finish, also ¼ inch in thickness. The cement method differs chiefly in that a blanket of asbestos insulating cement, 1½ inches in thickness, is substituted for the magnesia insulation used in the block method and this blanket is covered with a 1 to 2 mixture of the insulating cement and Portland cement ¼ inch thick, before the application of the outer protective coating of weatherproof finish. In both methods, of course, wire netting, flashing and bands have to be employed for bonding the insulation and finishing off manhole openings, etc.

The value of insulation can always be appraised in some such manner and with marked reliability. The worth of applications can also be predetermined with considerable accuracy. Many mills know this from experience and all mills will find a careful check up of insulation requirements decidedly advisable.

John F. Boyle Dead

John F. Boyle, who was a member of the New York and New Jersey Tunnel Commission from 1922 to 1929, and had long been influential in Democratic politics in New Jersey, having been treasurer of the Hudson County campaign committees for many years, died Wednesday, June 25, at his home in the Summit Apartments, Hudson boulevard and Sip avenue, Jersey City. He had been stricken with an attack of heart disease at the office of his firm, the John F. Boyle Company, makers of straw board and boxes, and was immediately taken to his home, dying within a few moments of his arrival.

Although Mr. Boyle never held an elective office or accepted a salaried appointment, he was best known in New Jersey as an adviser of Mayor Hague and the Democratic party. He succeeded the late Thomas F. Martin, former Secretary of State, as owner of the *Hudson Dispatch*, a Union City daily which is regarded as the official Democratic organ in Hudson County. He was born in New York City July 4, 1870.

Eminently successful in business, he acquired large property holdings, including the tract which became known as Boyle's Thirty Acres, in Jersey City, the arena for the Dempsey-Carpentier fight of 1921.

At the time of death he held a controlling interest in the Commercial Trust Company of New Jersey, of which he was director. He was reputed to have been the largest individual taxpayer in Hudson County.

Mr. Boyle had also been a member of the board of managers of the State Hospital for the Insane at Morris Plains. He was also a member of the Hudson County Sinking Fund Commission and was the campaign manager for Alexander Simpson, the Democratic nominee for United States Senator.

Surviving him are his widow, Mrs. Katherine Cochrane Boyle; two sons, John F. Boyle, Jr., and James J. Boyle; two daughters, Mrs. Anne Boyle Egner and Mrs. Catherine Kip; a granddaughter, Miss Ann Boyle Egner, and three brothers, Andrew Boyle, Fire Chief Roger Boyle of Jersey City, and Luke Boyle.

Utilizing State Forest Preserves

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., July 7, 1930.—A conference of the New York State Economic Council is scheduled to take place late in July at the Lake Placid Club when methods of utilizing state forest preserves, which now cannot be entered for lumbering or other operations, will be fully discussed. Dean Nelson C. Brown, of the Syracuse College of Forestry and chairman of the conservation committee, will preside. The committee on conservation has been asked by the Economic Council to formulate a long range policy in regard to the forest preserves in the Adirondacks and Catskill regions.

Over 2,000,000 acres of land is now owned by the state and it is felt that the people should be interested in knowing the condition and possibilities of this large tract. It was announced that the conference will be open to any person interested in the future use and development of the forest sections, whether under present or prospective policies while the conservation committee will also consider both recreational and industrial uses for the preserves. George W. Sisson, Jr., president of the Racquette River Paper Company, is a member of the committee which also includes R. E. Sykes, of St. Lawrence University; Albert E. Cluett, of Troy; C. B. Rogers, of Utica; A. S. Houghton and C. J. Hamlin, of Buffalo.

PAPER TRADE JOURNAL
ESTABLISHED 1872

10 East 39th St., New York

Henry J. Berger
Editor

Ronald G. Macdonald
Editor Technical Section

Herbert J. Laughton
Associate Editor

Thomas J. Burke, C. A.
Editor Cost Section

Reginald Trautschold, M. E.,
Power Engineering Consultant

Price, Per Copy, 10 Cents — United States, Per Annum, $4.00
Canada and Foreign Countries in Postal Union, $6.00

Member A. B. C. Audit Bureau of Circulations

Vol. XCI — New York, July 10, 1930 — No. 2

BEST PROFITS IN PAPER SPECIALTIES

Roger W. Babson, the well known economist brings out some interesting facts in a survey of the paper industry which has just been issued. The backbone of the paper industry is, of course, the production and sale of newsprint paper, says Mr. Babson. The rapidly growing size and number of our daily newspapers requires constantly increasing amounts of this product. This end of the business, however, has not been profitable for several years, owing to over-building of productive capacity.

About 22 per cent of the capacity of the United States and Canadian news print mills is unused. Demand for the product is steadily growing, but it has not caught up with the tremendous capacity for output. In the first five months of 1930 the output of news print in the United States and Canada was 1,648,128 tons, or practically the same as last year, whereas the full capacity for production was about 2,197,500 tons. Total consumption for 1930 promises to be fully as great as in 1929, and there is a possibility that it will increase about 3 per cent. The printing and publishing business is one of the few lines of industry which has not suffered severely in the current business recession. Employment in newspaper printing is running 2 per cent above last last year, whereas most other industries are running far below last year. Hence, were it not for the burdensome over-capacity and correspondingly high over-head on unused plant and machinery, the news print business would be one of the most profitable lines today. Instead, prices have been forced down to $62 a ton compared with $74 a ton five years ago. The kraft paper and paperboard business has similarly overproduced and prices there are at an unprofitable level.

In time the consumption of these papers should more nearly equal the capacity for production and then the price will go up and profits increase. At present, however, the companies in the paper business that are showing definite progress are those in specialty lines such as paper towels, fine tissues, containers, etc. The companies manufacturing specialties where markets are rapidly expanding, and where competition, through keen, is not such as to force unprofitable price levels, are making good earnings and have an excellent outlook.

We need only to examine the earnings' record of the leading paper companies to see what branches of the business are going ahead and what branches are standing still or falling back. Out of twelve leading paper producers in 1929, seven showed profits, and five reported deficits. Out of the seven profitable companies five were manufacturers of specialty lines; two were news print producers, but derived a large part of their income from the sale of hydro-electric power. The companies showing the largest earnings per share of stock were in each case specialty manufacturers. Moreover, the trend of earnings compared with previous years shows that the specialties have taken the lead. Of the twelve leading paper concerns only five showed better earnings in 1929 than in 1928, and each one of these five was a specialty manufacturer. The other seven were primarily news print manufacturers. Kraft paper producers also showed less earnings in 1929 than in the preceding year. The same story is being repeated in 1930. Earnings for the first quarter are heavily in favor of the specialty companies as contrasted with the newsprint or kraft paper division.

Paper stocks as a group have not been popular for several years. To be sure, they advanced some in the bull market last summer, but nothing approaching the wild inflation of prices in other stocks. They have, nevertheless, suffered in the general market decline since last Fall, and are now selling 33 per cent below their 1929 high point, and 11 per cent below the high point for the current year. Hence, they now appear to be well deflated.

If the outlook were for immediate resumption of prosperous conditions in the news print, kraft, and paperboard ends of the business, their securities would be an attractive purchase at current levels. However, the factor of over-production and low paper prices continues to hinder recovery. Ultimately a better relation between supply and demand will be brought about and paper stocks will again be popular. Some of the large newsprint producers, especially those with important water power holdings, should some day sell at much higher levels. In fact, the hydro-electric properties of certain companies have a great potential value and this public utility phase of the business may in time eclipse the paper manufacturing operations as a source of revenue. At present, however, the best investment opportunities appear in the sound companies manufacturing paper specialties. The use of paper towels is rapidly increasing. The paper towel is recognized as an inexpensive, efficient and thoroughly sanitary toilet article. It finds wide use in hotels, public buildings, offices, stores and to some extent in private homes. The consumption of paper towels is increasing very rapidly, and still has a large potential market.

High-grade tissues both for toilet and other purposes have a constantly increasing market. Moreover, national advertising is educating the public to discriminate between various grades of tissues and educating them to select only those of thoroughly hygienic quality. Profit margins are relatively high in these specialty lines, and consequently those companies whose main source of income depends upon such lines are now in the best position. Their market can be further stimulated by aggressive

advertising. Such companies are already making reasonably good profits, but their securities as a rule are selling at low levels in relation to earnings. Their stocks have been sympathetically affected by a decline in the paper industry as a whole, even though their prospects are much more promising than those of the companies wholly dependent on newsprint, kraft, or paperboard manufacture.

There is no hurry about buying stocks under present conditions of the general market. However, the paper industry will not remain always in a state of depression. There is now a definite let-up in the building of new paper mills, which, if continued, will enable the normal 6 per cent annual increase in consumption to catch up with the producing capacity. Moreover, available supplies of timber are steadily being diminished and the frontier of raw materials is being pushed further and further back. An intelligent policy of conservation of pulpwood is extremely necessary. Those companies which operate most efficiently and conserve their resources in every possible way, will in the long run prove the best investments. Prices of timber are sure to rise as it becomes more scarce. Hence, while the long-pull outlook for the business as a whole is for improvement, it would seem that the specialty manufacturers are in a preferred position with respect to the rest of the industry, and that stocks of well integrated, efficiently managed specialty producers with adequate raw material and water supplies, should prove the most profitable.

A Century Old Business Leader

Life in America was vastly different 100 years ago when on a farm in Leicester, Massachusetts, on July 10, a baby boy was born who was later to become the head of the largest Leather Belt manufacturing concern in the world. Today, the Graton & Knight Company, of which Henry Clay Graton was a founder, is in its eightieth year of existence, and the man who was its guiding genius during most of these years still lives in good health to look back upon a splendid accomplishment. To enjoy a hundredth birthday, is a privilege that is accorded to few of us. To live through one hundred years of such stupendous changes as this man has seen in the industrial development of America, seems hardly possible. To have seen and lived in the same town with men who fought at Bunker Hill and who served in the ragged armies of Washington seems almost incredible.

Young Graton grew up as many boys in those days did, working on his parents' farm, long hard hours, building a physique that was later to give him a century's outlook on life. At the age of 21, he and a friend of his, Joseph A. Knight, decided to go into the Leather Belt building business. In a two-room shop which measured only 20 x 60 feet, the gigantic Graton & Knight enterprise was launched. These two boys combined funds and between them the munificent amount of $800.00 formed the entire capital behind the concern. Henry Graton and his partner, however, were not daunted, because of their small resources. With the splendid courage, self reliance and perseverance, so characteristic of the early founders of great industries, they worked long hours in their tiny room, currying and cutting leather which was made into Belting, to be sold to nearby shops. The day of the machine age was rapidly drawing near and Graton was one of the first to appreciate and recognize it. Factories, small ones to be sure, were being built everywhere, and the need of Leather Belting was already apparent.

The first sales by Mr. Graton were naturally made to neighboring concerns, and all through the history of the company, there has been a real effort made to promote the development of the friendly, neighborly idea that was so much in evidence in the early days. How well this has been accomplished is proven by the fact that many of the original customers still appear on the books of the company. The business friends of the Graton & Knight Company, of those pioneering days, included many of the outstanding American manufacturers. Such manufacturers as Chickering, the piano firm; Wm. Crompton, the manufacturer of the first American power loom; Rome Iron Works; Ichabod Washburn, inventor of a method for spinning piano wire. It is doubtful if any community in this country was the birthplace of more epoch-making industries than the little community in which this leather Belting pioneer had the foresight to start his modest business.

Mr. Graton, with a twinkle in his eyes, tells of "the good old days," when he traveled thirty miles a day in search of business. Stage coaches were used as conveyances to the nearby towns. Railroads did not amount to much, and rather than trust to the very uncertain service, he usually traveled the roads or train tracks on foot. It was usually quicker to walk between towns than to wait for the trains. Practically all of his selling was done from a sample pack that he carried over his shoulder. It was entirely fitting, just a few weeks ago, that he, the first salesman of the Graton & Knight Company, should be accorded the honor of opening the Sales Convention of that company and of addressing its salesmen who came from every part of the country for conference.

Much of the business of those early days was done on a trading basis, and many times it was necessary to give Belting to a customer in exchange for the commodity of their manufacture. All kinds of things were taken in payment of bills. Frequently on the floor of the little shop would be seen such articles as horse rakes, clothing, machines of various sorts, bolts, nuts, and wire goods. The Chickering Piano people frequently needed Belting, and though they were perfectly solvent, they did not always have the funds to pay for it. Their pianos were taken in exchange for Belting and then it was up to young Graton to sell pianos along with his Leather line.

During Mr. Graton's first years of business, none of the great names of present day American industry had yet come into the picture. John D. Rockefeller was still a student at school. Jay Gould was likewise studying at an academy. Andrew Carnegie was working in a Pittsburgh steel mill. Henry Clay was senator from Kentucky; Daniel Webster, Secretary of State. The first rumblings of a great conflict were just being heard, and John Brown's body was yet to lie mouldering in its grave.

There is something amazing about this story of the lifetime and one hundredth birthday of a man who is perhaps the dean of America's manufacturers. There is something of the intensely romantic about this one hundred year old industrialist who has seen practically the whole panorama of American business unfold before his eyes—this still alert, ruddy faced, blue eyed man who founded a great company—this splendid man upon whom the rays of the last sunset now shine only to enhance even more his contribution to the progress of American industry.

New President of Canada Power & Paper

Upon the request of George Chahoon, Jr., to be allowed to retire from the presidency of the Canada Power and Paper Corporation, J. H. Gundy has been appointed to replace him.

Mr. Chahoon stated that he had been associated with the Canadian news prints industry since its infancy and after twenty-eight years of service desired to be relieved of the direct responsibilities of the office of president. Mr. Chahoon will remain as a director of the corporation and an executive, and as such will devote a large part of his time to the corporation's affairs.

J. H. Gundy has been closely identified with the affairs of the Corporation since its formation, in which he took a prominent part. His acceptance of the presidency assures an energetic continuation of the development which has already made Canada Power and Paper Corporation the largest Canadian producer of news print paper.

THE *EXTRA* ADVANTAGE

INDUSTRIAL buyers do not select materials by the 'blindfold' test. Each factor in a transaction is weighed with exactitude. This scientific procedure reveals the existence of an extra advantage attached to the use of E B G Liquid Chlorine.

It is not limited to intrinsic merit of product, high though this may be. It is an advantage derived from the unusual ideals of the E B G organization. Of knowing that E B G places the interests of the buyer above all other considerations. And precedents of good service have been established which are also helpful to every E B G customer.

EBG

Liquid Chlorine

ELECTRO BLEACHING GAS CO. Plant: Niagara Falls, New York
Main Office: 9 E. 41st St., New York

PIONEER MANUFACTURER
OF LIQUID CHLORINE

Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

Hard Woods for Soda Pulp*

By E. Sutermeister[1]

We have made laboratory tests on white maple, beech, white and yellow birch, red-heart birch and black gum. The general conclusion was that they cooked nearly as easily as poplar under the same conditions of treatment, but that in most cases the fiber was harder to bleach. The important factor seemed to be to use the same percentage of caustic soda based on the dry weight of the wood. The yields, also based on the dry weight of the wood, were fully equal to those from poplar and in some cases slightly exceeded them. The bleach required to give the standard color is greater than for poplar, raging from 2 to 8 per cent more on the weight of fiber.

Trials on a mill scale have also been made with black gum, and white maple, and semi-commercial cooks and paper making trials with white and gray birch. When made into paper white maple fiber is practically the equivalent of poplar while gum and birch fibers are superior in some ways. As compared with poplar, gum seems to give greater bulk and strength while birch gives a rather firmer and more leathery feeling sheet.

A great deal of work has been done by the Forest Products Laboratory in determining the value of hard woods for soda pulp and some of their results were published in "Paper" for June 30, 1919. From their tests it would appear possible to divide the woods roughly into three classes: (1) cooking easily, practically as easily as poplar, (2) cooking with a little more difficulty than poplar, and (3) cooking with difficulty. In the first class would be aspen, cottonwood, basswood, sycamore and black willow; in the second, white and yellow birch, magnolia, black gum, cotton gum, red gum and beech; and in the third class, white ash, and red and white oak. The fiber from the last three woods would find little use in paper making. Chestnut wood which has had its tannin extracted would fall in the second class.

The Forest Service also gives the weight per cubic foot for these woods, the yield in pounds of fiber per 100 cubic feet of solid wood and the fiber length of the resulting pulp. The weight per cubic foot varies from 21 for willow and basswood up to 36 for beech while the yield varies from 950 pounds for willow to 1530 pounds for beech. The yield for poplar is given as 1080 pounds. The fiber length measurements are interesting because they show that of those listed only black willow is shorter than poplar while many of the other woods have longer fibers. The length for aspen (poplar) is given as 1.0 mm while the others, except for willow, range from 1.1 to 1.7 mm. This is a point in favor of the hard woods, especially when it is taken into account that their fibers are in some cases more slender than poplar and, therefore, have more felting power.

Practical Consideration

Coming now to the practical use of these woods it is common knowledge that a number of mills have been accustomed to use them for years and have not encountered any serious difficulties. Several of these mills are in the south and the northern mills have also used hard woods for some time with good success. It cannot be considered that the idea of using hard woods is in any way new.

It seems to be generally considered that it is better practice to cook the hard woods separately, though some mills cook them mixed with poplar and claim to see no harmful effects. This is what would be expected from our laboratory tests but it is generally felt that hard woods require a longer cooking period or more caustic soda than poplar. This belief that they require more caustic is probably due to the fact that the amount used is generally based on the cord rather than on the weight of wood in the digester. If the same number of pounds of caustic is used for a cord of wood in each case, the hard wood will be under-cooked or the poplar over-cooked, but if the amount used is based on the weight of the wood it will be found that the two kinds require practically the same amounts. Of course more will have to be used per digester because the hard wood is heavier and a digester holds a greater weight of that wood. If the strength of the liquor is properly adjusted it is possible to use the same number of cords per digester for both hard woods and poplar.

So far as I am aware there is no difference between the two kinds of wood in the washing, screening and bleaching treatments.

As it appears that hard wood can be used with good results the next thing to consider is the question of supply and for my information along this line I am indebted to our Woodlands Department.

There is said to be an almost unlimited supply of second growth white maple, white and silver birch and beech within a radius of 150 miles of the New England Soda Pulp Mills, and most of this is in comparatively small holdings. By the use of automobile trucks that which is within 50 miles of the mill can be delivered directly while much of the remainder is within delivery distance of the railroads.

Wood Preparation

Hardwood is prepared in the same manner as poplar. The trees are felled with a crosscut saw during the season when the sap runs and are peeled like poplar with a small spud. Soft maple will peel nearly as readily as poplar, but the bark on birch has a tendency to break and come off in small chunks, while beech is even harder to peel than birch. At the close of the peeling season the wood is sawed into 4 ft. bolts. Even if sawed immediately after peeling maple, birch and beech all cut harder than poplar while if maple is allowed to season too long, it be-

* Presented at the Northeastern Div. of the Superintendents Association, Prouts Neck, Maine, June 28, 1930.

[1] Member TAPPI, Chief Chemist, S. D. Warren Co., Cumberland Mills, Me.

comes hard and is still more difficult to saw. This is also true of the southern wood—sycamore.

Hauling usually takes place not earlier than October 1st, after the wood is pretty well dried out. As maple and birch are usually mixed we have no reliable figures to show the weights of each separately but our records show that mixed peeled hard wood as delivered to us by the railroad in carload lots averages about 4000 pounds per cord. We estimate that maple is lighter than birch by approximately 400 pounds per cord. Four feet peeled hard wood cannot be river driven successfully because of its tendency to sink. This may cause losses as great as 25 per cent.

It has been the experience at Cumberland Mills that peeled hardwood stands up better in storage than spruce, fir, hemlock or poplar. This is surprising, as unpeeled hardwood ordinarily goes to pieces during the first summer of storage. This is a most important point as we have demonstrated from laboratory tests on birch wood that decay may increase the cost of wood per ton of fiber by as much as 50 per cent. We have estimated that with this wood each per cent of rotten wood increases the cost of fiber by 48 cents per ton.

While hardwood is ordinarily a little more crooked than poplar there is usually fully as much solid wood per cord because it is sounder. We get some discolored hardwood but rarely any rotten hearted, which is a serious difficulty with poplar.

In spite of the fact that hardwood peels harder, saws harder and is heavier to haul than poplar, it may be purchased for somewhat less per cord f.o.b. cars. There are several reasons for this The stumpage value is less than poplar. Again a man having a lot with softwood—poplar, maple, birch and beech—is anxious to clean his lot while he is cutting in order to cheapen his operations and to enable him to dispose of everything on the lot. Another reason is that the cordwood market in this section is pretty well demoralized because more farmers are burning coal or oil. Cordwood producers are lucky if they receive pay for more than 85 per cent of the wood they deliver because of bad bills, but if they sell to a paper company, they are sure of prompt payment for all of their wood.

These remarks are based on the use of good, clean second growth wood, running up to 12 to 13 inches in diameter with nothing taken smaller than 4 inches at the top end. If large, old growth, gnarly, seamy wood is accepted, there will be a great deal of waste and it will be found very hard to put it in shape for the chippers.

TAPPI Notes

A. W. Pesch of the Falls Manufacturing Company of Oconto Falls, Wis., is now with the Southern International Paper Company at Bastrop, La.

O. F. Bryant, manager of the Nashwaak Paper Company at St. John, N. B. is to resign his position to become secretary of the Canadian Technical Section.

F. C. Clark, consulting engineer of South Manchester, Conn. is now at Everett, Wash.

Rene Filliat, director of exports of Papeteries Navarre and Raoul de Saint Hilaire, technical director of Procedes Navarre of Lyons, France, are visiting in New York in the interest of the Delthirna sizing process.

H. J. Heinsius, manager director of the Appeldoorn mill of Van Gelder Zonen of The Netherlands, is visiting the United States a member of the Rotary Internatianal.

I. H. Andrews, chief chemist of Powell River Company, Ltd., Powell River, B. C., is one of the principal speakers at the meeting of the American Newspaper Publishers Association at West Boden Springs, Indiana. His recent studies indicate that the nature of ink used and the temperature at which it is actually applied are of much more importance than the character of the news print used.

J. E. Hanny, manager of the West Linn, Oregon mill of Crown Willamette Paper Company is now manager of the Camas, Wash., mill of the same company.

James Fagen formerly sulphite superintendent of the Camas, Wash., mill of the Crown Willamette Company is now sulphite superintendent of the new Puget Sound Pulp and Timber Company mill at Everett, Wash. G. J. Armbruster who was recently with Fraser Companies is general superintendent of the Puget Sound mill.

Powell River Company, Ltd., of Powell River, B. C., will again finance research work at the University of British Columbia. This research is intended to find an agency to prevent the discoloration of news print. The research grants amount to $5,000.

F. W. Motschman has recently been appointed supervisor of technical control in the kraft mills of the International Paper Company. His headquarters will be the research department of the company at Glens Falls, N. Y.

Fraser Companies Ltd. TAPPI Corporate Member

The most recent company to become a Corporate member of the Technical Association is the Fraser Companies, Ltd., of Edmundston, N. B., which includes the Restigouche Company which has recently begun a 150 ton bleached sulphite mill at Campbellton, N. B., and the Dominion Pulp Company, Ltd., of Chatham, N. B., which is a 60 ton sulphite mill.

The principal mills of the Fraser Companies, Ltd., and Fraser Paper, Ltd., are uniquely located on both sides of the St. John River at Edmundston, N. B., and Madawaska, Maine. Pulp is pumped from the Edmundston mill to the Madawaska mill. The Edmundston mill is equipped with eight digesters and two wet machines to produce 300 tons daily of bleached sulphite pulp. Its ground wood mill, making 150 tons daily, has 20 three-pocket grinders and its paper mill has four 1,500 pound beaters, three jordans and one 128 inch six cylinder board machine on which is made core paper, sheathing, bottle cap, test board, manila specialties and similar grades.

The Madawaska mill is equipped with 21 two thousand pound beaters, two Claflins and 12 jordans, two 166 inch, one 192 inch, one 202 inch and two 226 inch fourdriniers, one 146 inch seven cylinder machine making 200 tons daily of bonds, ledgers, waxing, sulphite specialties, catalog, tag, sheathing, manila specialties, folding box, patent coated board and bristols.

The representative of the Fraser Companies, Ltd., in the Technical Association will be Gosta P. Genberg, the technical director of the companies.

F. C. Clark Goes With Skinner & Sherman, Inc.

After August 1, 1930, the firm of Skinner, Sherman & Esselen, Inc., will become Skinner & Sherman, Inc., Dr. G. J. Esselen having withdrawn by mutual consent. Recently this organization has extended its activities by combining the consulting engineering practice of Frederic C. Clark of South Manchester, Conn., with its own business.

Mr. Clark has had a broad and varied experience and is well known especially in the pulp and paper industry. He has held a number of important positions in his progress toward his present standing in the industry. He was for several years Chief of the Paper Section of the Bureau of Standards at Washington from which position he went to the American Writing Paper Company at Holyoke in charge of the Department of Technical Control. Later he was vice-president of the Pejepscot Paper Company in charge of manufacturing and still later secretary and production manager for the Hawthorne Paper Company. He is a charter member of the Technical Association of the Pulp and Paper Industry, and has organized and taken an active part in many of its important committees.

Burton G. Philbrick, who for many years has been in charge of its bacteriological department, and Mr. Clark have been elected vice-presidents; and Wilder A. Chapman, in charge of its analytical and metallurgical work, has been elected secretary.

The Technical Adviser in the Paper Industry

By Charles A. Newhall[1]

Shifting control of an industry from the practical man to the technically trained man, too often has disastrous results for all concerned. The effects are felt in great financial loss to stockholders as well as loss of prestige, position, and money to individuals.

The advent of the technical man in a mill organization has time and again been the forerunner of extensive changes in personnel. Skilled craftsmen have grown nervous at the sight of strangers taking samples and making tests.

This attitude on the part of the practical operative comes as a distinct shock to most technical men, especially to the young man just out of school. For, if he has had the proper training in the ethics of his profession, the technical man wants to lend a helping hand. He looks on himself as a physician and a teacher working with industrial processes and raw materials just as a doctor of medicine or a surgeon works with people and materia medica.

When, however, he finds that many practical operatives still insist on using "charms" and "old family remedies," the technical man, particularly if he is young and just starting in the profession, is apt to decide that operatives are not progressive and possibly not easy to work with. Any effort on his part to improve things results frequently in a "house cleaning" in the operative department or the technical department or both. Even the management has been the loser because of this unnecessary wasteful and wholly unjustified lack of understanding of the newer technical methods of industry as compared with the older artistic or rule of thumb methods.

It is unfortunate for both the technical men and for the management of process industries that the universities from which the great majority of technical men are drawn have not entirely prepared them to deal with their fellow men in business. They understand the reactions of molecules and atoms under various conditions, but they may not be very familiar with the behavior of the people with whom they must work.

Difficult to Change Customs

They know for example, that tannin and iron under certain well established conditions will make ink. To a chemist it is so obvious that a dirty looking, dark sheet of news print will result from the ink reaction when hemlock pulp high in tannin, and mill water containing iron salts come together, that the remedy for off color news print seems very simple. Yet in fact, the practical application of an obvious and simple remedy is very complicated for the reason that mill superintendents, machine tenders and groundwood men have been following certain methods not only for years but for generations. It takes time and patience to get people to adopt even the simplest of changes in long established ways.

Another example is that of a mill which for years had been having trouble with curl in a sheet made on a special order. Several machine tenders lost their jobs in consequence. Thousands of dollars had been spent in securing the advice of experts and in trying out various devices to remedy the trouble, but with no tangible result. Finally, the mill chemist, who admittedly knew nothing about the practical operation of a paper machine, was asked to investigate the problem with the idea that the trouble might be due to the chemical and physical properties of the material going in to the paper machine wire, e.g. hydrogen ion concentration, hydration, slowness, etc. It was definitely established by long tests that the curl was in no way affected by these chemical and physical characteristics. Therefore the machine operation alone was the cause. The chemist and one of the machine tenders had, through long association built up a mutual confidence and respect. They set out together to solve the problem. The chemist reasoned from purely scientific grounds that the curl could be caused by only two things in the machine operation. With the cooperation of the machine tender, the theory was given a practical tryout. The result was perfect control, the machine tender being able to either produce or prevent a curl.

This last illustration serves also to emphasize the main point of this article; namely, that the industry as a whole, the consumer of pulp and paper, the salesman, the sales manager, the production superintendent and the majority of practical operative men, will all profit from the application of science to the industry directly in proportion to the practical use that is made of scientific discoveries and the methods of science. However to get practical results from the application of science, all departments of the industry must cooperate.

Science Not a Cure-all

Contrary to the expectations of many paper mill executives, science is not a cure-all for the ills of an industry. As well expect a tuberculosis patient to cure himself by giving him a ship's medicine chest from which to select remedies as to expect an old time mill to begin immediately to make more money because a technical department has been added. The practical operatives, faced with the "new competition," have the greatest need for the help that only science can give them in order that a merchantable grade product be turned out at a low cost. Pulp mills which have for decades been making ordinary sulphite pulp, overnight almost, face the alternative of converting their operations to rayon pulp or another of the new specialties, or shutting down entirely. The very existence of the practical operative's job depends, under these new competitive conditions, on his willingness and ability to work with the technical man.

Management Responsible for Lack of Harmony

This essential harmony and cooperation between the technical man and the operative is often rendered very difficult if not nearly impossible by the fact that executive officers or mill managers do not understand how to put the technical department into most useful operation. It is usually allowed to "just grow up" in the mill. Or else a new man is engaged and dropped into the existing technical organization without adequate explanation. In still other instances, a whole new organization is formed by making raids on mills where technical work has become well established, and the heterogeneous crew is foisted on the operative crew without explanation or due consideration of the needs and characteristics of the old operative crew. In either case, lack of harmony is bound to result: a technical crew that has "just grown up" in the mill will never command the respect of the operatives that is so essential to a well integrated organization. Similarly, a new technical man or crew is certain to be regarded with suspicion by the old operatives unless special care is exercised in launching him in the organization.

The Technical Man As An Adviser

Just as executives of industrial plants have for decades, drawn upon the professional experience of their lawyers and physicians, they should turn now to the technical man, but not as a trade or craft to replace the craftsmen already in the industry. A capable technical man is essentially an investigator and a teacher—the one to seek the spots where the proper application of science will be extremely beneficial to the industry.

[1] Member TAPPI, Consulting chemical engineer, Seattle, Wash.

It is interesting to note that the executives of one of the largest pulp and paper organizations in the world recently engaged one of the leading men in the profession to advise them in matters of organization of technical work and the selection of the professional personnel of this great corporation. The jealousies and conflicts between the technical men and operatives in this corporation had approximated a public scandal, with an adverse effect on financing, production, and sales. It was this wholly unprofessional attitude between the members of the technical and operative staffs that led the executive officers to adopt this new policy in dealing with technical matters.

A condition very similar to that just noted exists in many mills today or is being permitted to develop. Farsighted executives are taking steps to bring about the all-essential harmony between their technical department and the other departments of their organization.

Westinghouse A TAPPI Contributing Member

The Westinghouse Electric and Manufacturing Company has undoubtedly sold equipment of some kind to every pulp or paper mill in the United States. It is therefore quite appropriate that it should affiliate itself as a company member of the Technical Association with which it has long cooperated to promote the adoption of more efficient manufacturing processes.

As a leader in the electrical development of industry, Westinghouse takes a measurable amount of pride in being the pioneer in the introduction of the dual frequency system of speed control for supercalenders. It installed the first sectional drive in America equipped with automatic speed regulation by field control and it advocated and introduced moderate speed geared motors for the sectional drive.

It introduced the generator system of starting, inching and slow speed operation of sectional paper machines. The carbon pile voltage and section speed regulators for use in connection with the paper machine drive was introduced by Westinghouse which also made the first installation of sectional motor drive to cylinder moulds and presses on the wet end of board machine.

The Westinghouse Company started in 1884 with 200 employees in Pittsburgh, Pennsylvania. Today the company has 23 works and 32 service shops employing 50,000 people. Among its outstanding accomplishments of general interest are the following:

It created the first commercial alternating current meter (Shallenberger type); brought out the first commercial induction motor (Tecla type); lighted the buildings and grounds of the 1893 Chicago Worlds Fair; made the first use of the waters of Niagara to generate electricity in 1895; electrified the N. Y. N. H. and H. R. R.; built the first transformer to deliver one million volts from terminal to terminal; established the first regular broadcasting station, KDKA, and it introduced into America the steam turbine and developed the high speed turbine-generator for use with it. The turbine is the basis today of all large steam central station generation.

New Type of Felt-Seal Ball Bearing

S K F Industries, Inc., has developed a new type of patented Felt-Seal Ball Bearing possessing a number of distinctive features which mark a radical improvement in this type of bearing. A felt seal is provided as an integral part of the bearing, thus making it necessary for the machine manufacturer to provide only one housing enclosure.

The outer and inner races as well as the balls in the S K F Felt-Seal Bearing are made of high carbon, chrome alloy steel hardened throughout. The bore and outside diameter are ground to international standard dimensions and tolerances, the same as the corresponding standard single row bearings. The width, however, is slightly greater than the standard dimension of a single row bearing in order to accommodate the felt seal. The tolerances on eccentricity of the outer and inner races are also international standard tolerances for single row ball bearings.

The inner race projects a little beyond the face of the seal in order that the bearing may be pulled off the shaft at any time without the possibility of damaging the seal plates.

The seal consists of an inner steel plate which is dished at its periphery and bears against a shoulder formed on the outer race. A removable felt of substantial size comes next, then a dished steel end plate, after which a split steel ring is fitted into a groove in the outer race to hold the assembly in place.

An outstanding feature of the design is the ease with which the seal may be disassembled at any time and new felts applied. To disassemble the seal, it is merely necessary to spring the split steel ring out of the groove in the outer race, after which all the other component parts of the seal may be readily lifted out. The entire procedure of disassembling and reassembling is only a matter of a few minutes time.

The S K F Felt-Seal Bearing is made to the same high standard of quality that has become synonymous with all S K F marked products and offers outstanding advantages to the machine manufacturer. The bearing is available in sizes that are applicable to a wide range of small mechanical equipment, such as fractional horsepower and small motors, portable tools, and other light equipment.

Mid-West Buys Fulton Engineering Corp.

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 7, 1930.—The Mid-West Machine Company of this city has purchased the business, machinery and good will of the Fulton Enginering Company, of Middletown, it has been announced here. The deal involved a consideration of $150,000.

The Mid-West Company, which has been in business for the last five years, manufactures machinery and equipment for the treatment of the pulp just before it is converted into the finished product.

The Fulton Enginering Company manufactures processes and equipment for the drying of paper.

Though both products are separate in character, the merger of the two companies places them in a position to render conspicuous service to the paper trade it is asserted.

The new company will be known as the Mid-West Fulton Machine Company and the offices of the concern will be located in the Patterson Building, on Jefferson street, Dayton.

It is understood the company has taken over a three-story building to the rear of its present location to accommodate the added machinery and equipment which is being removed from Middletown as rapidly as possible. The company also acquired more space in the building it now occupies.

William V. Knoll, vice president and general manager of the new company, said the action of the concern in buying out the Fulton Engineering Company and acquiring additional factory space, is the initial step in a big expansion program which will take place this year.

Both companies have established a large foreign trade and with the acquisition of the Middletown firm the Dayton company has received valuable patents in Japan, France, England, Germany, Russia and other countries.

Officers of the company are:—Nelson S. Talbott, president; William V. Knoll, vice president and general manager; William B. Fulton, vice president; Logan R. Herbert, treasurer; Murray Smith, secretary; Victor C. Phenice, chief engineer; and Frank L. Shonkwiler, sales engineer.

Messrs. Smith, Herbert and Knoll were officers of the Mid-West Machine Company, while Messrs. Young, Shonkwiler, Phenice and Fulton were the officials of the Fulton Engineering Company of Middletown.

Work is now under way on construction of an enlargement to the plant of the Canadian Paper Company, Ltd., at Joliette, Que. Plans by the company's staff call for one story, 50 by 80 feet, stone foundation, brick walls, gravel roofing, concrete floors, etc. Most of the work will be done by day labor.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

For photostatic copies of articles appearing in the Abstract Section, address the chairman of the Abstracts Committee, Dr. Clarence J. West, National Research Council, 21st and B Streets, Washington, D. C. The charge for this service is 25 cents per page. Copies of United States patents may be obtained from the U. S. Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Power Plant

Some Notes on Belt and Belting Maintenance. Reginald Trautsch. Paper Trade J. 88, No. 19, 48-56 (May 9, 1929).—A brief outline of the types of approved belting which are available for transmission services at the present time, together with a somewhat more detailed explanation of some of the major factors entailed in the question of belt maintenance.—A.P.-C.

Conveyors and Chain Drives. T. E. Wright. Link-Belt Co. Paper Mill 52, No. 12, 5 (March 23, 1929).—A brief explanation of their application in the paper mill.—A.P.-C.

Extension to Paper Mills Presented Problems to Electrical Engineers. Anon. Pulp Paper Mag. Can. 27, 727 (May 16, 1929).—An outline of some features of the installation of equipment in connection with the expansion of the plant of the St. Lawrence Paper Mills, Three-Rivers, Que.—A.P.-C.

Pipes and Piping. I. Wooden Pipes. Reginald Trautschold. Paper Trade J. 88, No. 13, 46-50 (March 28, 1929).—A discussion of the merits of wooden pipes and piping for outside mill and underground installations, as well as for use within the confines of the mill proper.—A.P.-C.

Recording Instruments. J. H. Ferguson. The Bristol Co., Waterbury, Conn. Paper Mill 52, No. 15, 18, 23 (April 13, 1929).—A brief discussion of the application of records on washers, beaters, jordans and paper machines.—A.P.-C.

Recent Boiler Practice in Germany. F. Weber and A. Koneyung. Paper Industry 11, 254-257 (May, 1929).—Descriptions of a number of modern German boiler designs, exclusive of those of the latest high pressures.—A.P.-C.

Interesting Steam and Power Plant. Anon. Pulp Paper Mag. Can. 27, 719-721, 742, 744 (May 16, 1929).—A description of the steam plant of the St. Lawrence Paper Mills, Three-Rivers, Que.—A.P.-C.

Rational Selection of a Feed Water Treatment. C. E. Joos. Cochrane Corporation. Paper Trade J. 88, No. 15, 36-44 (April 11, 1929).—A discussion of the following factors in connection with the use of softened water in boiler water, particularly when using high pressures: degree of remanent hardness, corrosiveness of the water, reduction in total dissolved solids and suspended matter, protection against embrittlement of the boiler metal, cost of treatment including blowing down. The importance of the use of phosphate treatment to keep down the caustic alkalinity at high pressures is explained.—A.P.-C.

To Revamp or Rebuild. B. M. Owen and R. B. Elliott. Babcock-Wilcox and Goldie-McCullough, Ltd., Galt, Ont. Pulp Paper Mag. Can. International No., 105-114 (Feb. 1929); Paper Trade J. 88, No. 13, 59-67 (March 28, 1929).—An exhaustive study of the power requirements of a typical 300-ton Canadian newsprint mill, showing the relative advantages and disadvantages of rebuilding and revamping, from which the authors conclude that, in the specific case studied, it would be more advantageous to rebuild the power plant.—A.P.-C.

Co-Ordinating a Paper Mill's Demand for Steam and Power. J. C. Hayes and O. C. Callow. Power 68, 664-666 (1928).—Power and light are supplied by a semi-automatic water-turbine unit with a steam-turbine generator in reserve. Pulverized-coal-fired boilers supply steam to this unit when required and to digesters and paper-machine engines. Exhaust steam at 25 pounds and steam generated from wood refuse supplies the process demand.—A.P.-C.

Combustion of Solid Fuels and Heat Balance of a Boiler Plant. J. U. S. Steiger. World's Paper Trade Rev. 91, 778-782 (March 1, 1929); Paper Maker and Brit. Paper Trade J. 77, 380-382, 385 (April 2, 1929).—A brief general discussion.—A.P.-C.

Refractors and Boiler Furnace Linings. Reginald Trautschold. Paper Trade J. 88, No. 17, 56-60 (April 25, 1929).—A discussion of the requirements for satisfactory refractories and boiler furnace linings, including an example of an individual water-wall installation combing simplicity, effectiveness of construction and adaptability at small outlay.—A.P.-C.

Recent Developments in the Use of Movable-Grate Stokers. Pradel. Papier-Fabr. 27, 8-13 (1929).—Modern boiler-plant construction and operation is described. The author considers this type of stoker preferable to the use of powdered coal.—R. H. D.

Economics of Automatic Equipment for Systems Feeding Pulp and Paper Mills. F. C. Barnes. Canadian General Elec. Co., Ltd. Pulp Paper Mag. Can. International No., 233-236 (Feb. 1929).—A brief description of automatic hydro-electric power stations, supervised and operated at a distance, with a discussion of their economic advantages.—A.P.-C.

Recent Tendencies in Transformer Practice. J. C. Allan. Canadian General Elec. Co., Ltd. Pulp Paper Mag. Can. International No., 236-240 (Feb. 1929).—A brief description of recent improvements in transformer design.—A.P.-C.

Electrical Equipment for the Paper and Allied Industries. Anon. Papeterie Special No. 129-140 (1928).—A description of modern types of switches for circuits carrying heavy current at low and medium voltage.—A.P.-C.

Waterwheel Driven A. C. Generators. John R. Dunbar. Pulp Paper Mag. Can. International No. 273-280 (Feb. 1929).—A discussion of the construction of water-wheel-driven a. c. generators, showing how various operating requirements affect the design of the generators, and in some cases how different requirements are conflicting.—A.P.-C.

Air Systems for the Machine Room and Effect on Overall Thermal Efficiency. T. J. Higgins. Ross Engineering of Canada, Ltd. Pulp Paper Mag. Can. International No. 114-121 (Feb. 1929).—An analysis of the factors involved in drying steam requirements and more particularly of the various systems of ventilation for carrying off vapors from paper machine dryers.—A.P.-C.

Importance of Lubrication in Paper Making. Vacuum Oil Co. Papier 32, 167-177 (Feb. 1929).—A discussion of the importance of proper lubrication in keeping down the cost of production of paper to a minimum.—A.P.-C.

Rational Lubrication in Paper Mills. E. Arnold. Papier 32, 295-297 (March 1929).—A brief discussion of the necessity and advantages of the proper selection of lubricants.—A.P.-C.

Instrument for Testing Paper Machine Wires. René Escourrou. Papier 32, 409-413 (April, 1929).—A wheel which can carry on its circumference three samples, each having an area of 50 sq. cm., rotates partly immersed in a liquid bath, the temperature and

pH value of which can be adjusted to correspond with those of the stock on the paper machine. A number of openings are left in the surface of the wheel to permit the liquid to come in contact with both sides of the wire. A carborundum or milled, tempered steel wheel rests on the sample-carrying wheel and rotates in the same direction as the latter, but at a different peripheral speed. The sample wheel is provided with a revolution-counter. In comparing samples of different wires, the loss in weight is determined after a suitable time (corresponding to a given number of revolutions, which can be read on the counter) and the loss due to corrosion is corrected by immersing another sample in the liquid for the same length of time. The loss in draining qualities of the wire at any given stage in the test can be determined by measuring the rate of flow of a standard vaseline oil and comparing it with the rate of flow for the same wire before the test.—A.P.-C.

High Pressure Steam in Paper Mills. G. Cesconi, Papier 32, 265-280 (March 1929).—A discussion of the advantages of the use of high pressure steam in paper mills for the simultaneous production of electric power and of drying or process steam.—A.P.-C.

Hydraulic Turbines. H. S. Van Patter. Pulp Paper Mag. Can. International No. 265-271 (Feb. 1929).—A brief review of modern practice in hydraulic turbine design.—A.P.-C.

Design and Construction of Dams. George H. Kohl. Pulp Paper Mag. Can. International No. 205-212, 252 (Feb. 1929).—A general description of the different types of dams, with their suitability for various conditions; the chief points of consideration in selecting a site for and a type of dam; a brief description of some modern dams, together with a brief analysis of some failures that have occurred in the past 45 years.—A.P.-C.

Hydro-Electric Progress in Canada During 1928. Anon. Pulp Paper Mag. Can. International No. 213-228 (Feb. 1929).—A review of the hydro-electric power developments in Canada in 1928, by provinces.—A.P.-C.

Hydro Development at Powell River, B. C. P. Sandwell. Powell River Co., Ltd. Pulp Paper Mag. Can. International No. 229-232 (Feb. 1929).—A description of the plant.—A.P.-C.

Primary Considerations of a Hydro-Electric power Development. H. G. Cochrane. Power Corporation of Canada. Pulp Paper Mag. Can. International No. 197-204 (Feb. 1929).—A description of the successive steps to be taken in developing a typical Canadian hydro-electric power development, from the time when an individual or corporation first conceives the idea of harnessing a river to the time when power is actually generated.—A.P.-C.

Conduits for Power Plants. George Kohl. Pulp Paper Mag. Can. International No. 325-326 (Feb. 1929).—A brief discussion of the various methods of conveying water from the intake at the dam to the waterwheels in the power house.—A.P.-C.

Nova Scotia Power Commission's Hydro-Electric Power Developments, with Special Reference to the Mersey River System. H. W. Mahon. Nova Scotia Power Commission. Pulp Paper Mag. Can. International No. 129-132 (Feb. 1929).—A brief description of the power possibilities in Nova Scotia, with a general outline of the Commission's other hydro-electric plants and a more detailed description of the Mersey River system which is being developed particularly to supply the power requirements of the mill of the Mersey Paper Co.—A.P.-C.

Water Power and the Paper Industry. Anon. Pulp Paper Mag. Can. International No. 240-251 (Feb. 1929).—An analysis of the hydro-electric power consumed in Canadian pulp and paper mills.—A.P.-C.

Twin Falls Hydro-Electric Development. H. L. Sanborn. Abitibi Power and Paper Co., Iroquois Falls, Ont. Pulp Paper Mag. Can. International No. 297-304 (Feb. 1929).—A description of the hydro-electric plant and flood-control dam of the Abitibi Power and Paper Co., at Twin Falls, 11 miles up the Abitibi River from the pulp and paper mill at Iroquois Falls, Ont.—A.P.-C.

St. Lawrence Paper Plant Will Rival World's Biggest Mill. Anon. Pulp Paper Mag. Can. 27, 709-712, 744-748 (May 16, 1929).—A description of the extension to St. Lawrence Paper Mills' plant at Three-Rivers, Que., including two 160-inch Dominion Engineering paper machines and the necessary groundwood, sulphite and pulp preparation equipment.—A.P.-C.

Work of the United States Bureau of Standards. Anon. Paper Mill 52, No. 15, 20 (April 13), No. 17, 24 (April 27, 1929); Paper Industry 11, 268-269 (May 1929).—Brief notes on recent activities of the paper section of the U. S. Bureau of Standards.—A.P.-C.

Rust Prevention by the Use of Oil Paints; Theoretical and Practical Consideration. J. Hausen. Papier-Fabr. 27, 103-6. (1929).—General discussion of the importance and mechanism of the protection of iron-work by paints. Five years is given as the average life of paint coatings at present. The nature and physical structure of the pigment particles play an important part in the formation of a protective film, a variety of sizes being better than a uniform size, and rough or irregular particles being better than smooth round ones, from the viewpoint of effectiveness and permanence of the coating. Brief mention is made of testing methods in use.—R.H.D.

Miscellaneous

Measurement of Wood Receipts at the Mill. Chester W. Alden. Nashwaak Pulp and Paper Co., Ltd., St. John, N. B. Paper Trade J. 88, No. 16, 53-56 (April 18, 1929).—An outline of some of the systems of measuring wood receipts in use in Canadian mills, showing the necessity for developing a universally workable wood measurement.—A.P.-C.

Wood Consumption in News Print Mills. John S. Bates. Price Bros. and Co., Kenogami, Que. Paper Trade J. 88, No. 14, 51-52 (April 4, 1929).—The various factors dependent on the wood (species, size, growth, decay, etc.) are discussed, more particularly to show how yield of pulp per volume (either cord or 100 cubic feet) of wood can easily vary 15 or 20 per cent from one mill to another, while the true comparison of wood consumption on the weight basis may be favorable. A table is given showing relative wood consumption per ton of finished newsprint in two mills, the consumption being traced through the various stages of the manufacturing process.—A.P.-C.

Autogenous Metal Coating. G. L. Coppage. Pusey & Jones Corp., Wilmington, Del. Paper Mill 52, No. 15, 10 (April 13, 1929).—An explanation of the construction of the Schoop metal sprayer, its principle of construction, and some practical applications.—A.P.-C.

Shipping Paper on Skid Platforms. F. J. Shepard, Jr., Lewis-Shepard Co. Paper Mill 52, No. 19, 34-35 (May 11, 1929); Paper Trade J. 88, No. 20, 48-49 (April 16, 1929).—A discussion of the merits of this method of shipping.—A.P.-C.

Improved Paper Mill Floor. C. A. Stewart. Anti-Hydro Waterproofing Co., Newark, N. J. Paper Trade J. 88, No. 20, 49 (May 16, 1929).—The three main requirements of paper mill floors are: they should resist traffic without dusting and without cracking; they should be waterproof, they should resist the action of acids and alkalis. These qualities may be obtained by the addition of an integral waterproofing compound to the gauging water used to wet down the dry mixture of cement, sand and stone or cement and sand. In addition to the use of such an integral compound, there must be thorough supervision in making the floor.—A.P.-C.

Canadian Paperboard's Toronto Mill. A. R. R. Jones. Pulp Paper Mag. Can. International No. 351-355 (Feb. 1929).—A description of the mill.—A.P.-C.

Mill of Dominion Boxboards, Ltd. A. R. R. Jones. Pulp Paper Mag. Can. International No. 382-383 (Feb. 1929).—A brief description of the mill.—A.P.-C.

Canadian Pulp and Paper Research Institute. A. Papineau-

Couture. Can. Chem. Met. 13, 35-38 (Feb. 1929); Ind. Eng. Chem. (News Edit.) 7, No. 5, 4-5 (March 10, 1929).—A description of the recently completed Pulp and Paper Research Institute erected at Montreal by the Canadian Pulp and Paper Association for carrying out both pure and technical research in connection with the pulp and paper industry in co-operation with McGill University and the Canadian federal government.—A.P.-C.

Losses in Pulp and Paper Mills. W. G. MacNaughton. News Print Service Bureau, New York. Pulp Paper Mag. Can. International No. 359-362 (Feb. 1929).—A discussion of white water waste, barking drum refuse, pulp screenings, losses through inefficient use of steam and losses in chemical pulp mills.—A.P.-C.

Deficiencies of Paper Making. E. Arnould. Papier 32, 201-214 (Feb. 1929).—An address showing the empiricism which still prevails in the paper industry and the lack of proper scientific understanding of practically all the stages of the conversion of pulp into finished paper.—A.P.-C.

Pulp, Paper and Power Development in New Brunswick. J. Douglas Black. Pulp Paper Mag. Can. International No. 191-192 (Feb. 1929).—An outline of the developments at present under way in the province.—A.P.-C.

Pulp and Paper Research in Canada. E. P. Cameron. Forest Products Laboratories of Canada, Montreal. World's Paper Trade Rev. 91, 582-588 (Feb. 15, 1929).—An address presented to the Third British Empire Forestry Conference, held in Australia and New Zealand, August to October 1928.—A.P.-C.

Research as a Commercial Enterprise. R. W. Hovey. Oxford Paper Co., New York. Paper Industry 10, 2145-2147 (March, 1929).—Observations on the place of research in the pulp and paper industry.—A.P.-C.

Paper Research Literature. VII. Clarence J. West, National Research Council, Washington, D. C., and B. W. Scribner, Bureau of Standards, Washington, D. C. Paper Trade J. 88, No. 16, 57 (April 18, 1929).—A list of the contributions by the members of the U. S. Bureau of Standards, Department of Commerce, during 1928.—A.P.-C.

Paper Mill Made Bleach and Caustic Soda. Joseph E. Plumstead. Jessup and Moore Paper Co., Wilmington, Del. Paper Trade J. 88, No. 11, 59 (March 14, 1929).—Figures are given showing the high return on investment (up to 92 per cent) obtainable from an electrolytic bleach plant installation in a pulp and paper mill, particularly if the mill is making soda pulp so that the caustic can be used to supply the make-up soda requirements of the recovery department, but also in connection with sulphite mills where the caustic can be used (if there is no outside market for it) for the preparation either of the bleach or of the cooking liquor. Ordinarily, a plant having a capacity of less than 10,000 pounds per day of 35 per cent bleach would not be recommended.—A.P.-C.

United States Patents on Paper Making Issued During the First Quarter of 1929. Clarence J. West. National Research Council, Washington, D. C. Paper Trade J. 88, No. 16, 61-62 (April 18, 1929).—A list of the U. S. pulp and paper patents issued during Jan., Feb. and March, 1929.—A.P.-C.

Paper Specialties

Process and Apparatus for Coating Strips of Paper With a Solution. C. Munch. Belg. pat. 351,536, June 30, 1928.—The strip of paper is passed around a roll which is in contact with a second roll which rotates partly immersed in the solution to be applied to the paper. The two rolls rotate in the same direction, and a scraper is provided in connection with the partly immersed roll to regulate the layer of liquid to the desired thickness. —A.P.-C.

Manufacture of Sensitized Papers for Photography, Plans and Tracing. Anon. Papeterie Special No., 29-30 (1928).—Formulas and manufacturing directions are given for negative blueprint and brown-print paper, positive white-print paper, ferrocyanide paper, post cards and note paper sensitized with chrome salts, and tracing paper.—A.P.-C.

Building Boards from Waste Wood Products. A. E. Millington, U. S. pat. 1,708,586, April 9, 1929.—Waste wood material such as slabs or bark is disintegrated, softened by a treatment with a solution of salt and sodium carbonate and water and steam under pressure, refined and formed into boards.—A.P.-C.

Double-Coating of Book Papers. Anon. Papeterie Special No., 244-256 (1928).—A brief outline of the development of modern double-coating machines.—A.P.-C.

Manufacture of Greaseproof Paper. Papyro. Papeterie Special No. 81-84 (1928).—Practical directions on the selection and treatment of the raw materials suitable for this grade.—A.P.-C.

Waterproof and Greaseproof Papers. Albert L. Clapp assignor to Bennett, Inc. U. S. pats. 1,706,840 and 1,706,841, March 26, 1929.—No. 1,706,840—A soluble straight-chain fatty-acid soap such as sodium stearate or sodium oleate is incorporated into paper pulp together with sodium silicate; a metal salt such as aluminum sulphate or alum is added in sufficient quantity to precipitate both the soap and the sodium silicate; and the pulp is formed into paper. No. 1,706,841 specifies production of a waterproof and greaseproof paper by incorporating with the pulp, glue, an aqueous dispersion of waterproofing material such as a wax, bitumen, or resin and sodium silicate, and by adding aluminum sulphate as a precipitating agent to form a voluminous precipitate of aluminum silicate and to cause the glue and dispersed material to be fixed on the pulp.—A.P.-C.

Recipes for Paper and Pasteboard. K. G. Junge. Paper Industry 11, 279,281 (May 1929).—A number of processes for making paper and pasteboard impervious to moisture or fats are briefly described.—A.P.-C.

Stencil Sheet. S. Horii. U. S. Pat. 1,698,705, Jan. 8, 1929.—A base of fibrous material such as yoshino paper carries an impregnating composition comprising a natural or synthetic resin, cellulose nitrate or cellulose or mannan acetate or other suitable esters of polysaccharides and a tempering agent such as stearin and castor oil.—A.P.-C.

Roofing and Process of Making Same. F. J. Commin and A. H. J. Wright, U. S. pat. 1,700,561, Jan. 29, 1929.—Reinforced sheet of roofing is produced by taking a thin metallic plate with a number of openings and tongues projecting from the plate, heating the plate, applying adhesive to both sides of the heated plate, applying a felted sheet of fibrous pulp and pitch to each side of the adhesive-covered plate, subjecting the plate and felted sheet to light pressure to insure an intimate contact between the adhesive and the sheet and embed the tongues into the sheet, and then subjecting the reinforced sheet successively to heat and pressure sufficiently heavy to materially reduce the thickness of the sheet, force the material through the holes of the metal sheet and bend the projecting tongues into the felted sheet.—A.P.-C.

Composition Shingles. A. L. Clapp assignor to The Flintkote Co. U. S. pat. 1,698,298, Jan. 8, 1929.—Asbestos fiber is beaten in water together with cellulose fiber and a water proofing material such as montan wax and gilsonite and a precipitable sizing such as rosin size is added, followed by addition of a precipitating agent such as aluminum sulphate and further beating after each of these additions; the material is then run off on a paper machine, and is then fluxed and cut into shingles.—A.P.-C.

Safety Paper. L. Gailer assignor to E. E. Lloyd Paper Co. U. S. pat. 1,692,645, Nov. 20, 1928.—The paper has a coating of dye coloring having compressed portions to provide identification matter in the coating.—A.P.-C.

Straw Paper Stock. L. Griffin assignor to Ball Bros. Co. U. S. pat. 1,692,774, Nov. 20, 1928.—Paper is formed containing straw fibers and the residue of a weak sodium sulphate liquor in which the straw was disintegrated.—A.P.-C.

Bituminous Emulsions for Use in Paper Manufacture. L. Kirschbraun, U. S. pat, 1,707,809, April 2, 1929.—Emulsions which may be used with fibrous materials for paper manufacture are

formed of bituminous material such as asphalt together with a fluid vehicle such as water and colloidal clay or other emulsifying agent, and, after the emulsion is formed, there is added to it soluble salts such as sodium sulphite and zinc sulphate, forming by chemical reaction *in situ* a protective coating for the emulsified particles without tending to change the size of the dispersed bituminous particles.—A.P.-C.

Paper Containing Bituminous Material. L. Kirschbraun and A. L. Clapp assignors to the Flintkote Co. U. S. pat. 1,708,926, April 9, 1929.—Fibrous stock containing a bituminous-pitch type base in aqueous dispersion together with a dispersion agent such as colloidal clay is treated (suitably by adding sodium silicate and alum) to cause the dispersed bituminous base to deposit an unaltered state and to clot upon the fibrous stock solely by the addition of reacting inorganic substances.—A.P.-C.

Waterproofing Material and Process of Making Same. L. Kirschbraun, U. S. pat. 1,708,927, April 9, 1929.—Bituminous material such as asphalt is reduced to relatively dry comminuted form, a protective coating, such as may be formed from sodium silicate and aluminum sulphate, is applied to the particles, the product is mixed with fibrous stock and felted into sheet form. —A.P.-C.

Building Felt. R. P. Perry assignor to The Barrett Co. U. S. pat. 1,707,491, April 2, 1929.—An aqueous mixture of paper making stock and an emulsion containing waterproofing material such as asphalt and steatite is formed into sheets on a paper machine.—A.P.-C.

Impregnating Paper with Rubber or Similar Substances. R. P. Rose and H. E. Cude assignors to General Rubber Co. U. S. pat. 1,705,537, March 19, 1929.—Cotton fiber is cooked with sodium carbonate solution to remove fats, oils, waxes and other non-cellulosic substances without impairing the strength of the fiber, and formed into sheets; the latter are treated with a dispersion such as rubber or glue-glycerol composition.—A.P.-C.

Roofing Felt. Pierre Drewsen assignor to The Barrett Co. Can. pats. 285,686 and 285,687, Dec. 18, 1928.—No. 285,686—Cordage fiber is beaten at 90° to 100° C. with approximately 10% its weight of strong alkali, such as caustic soda or calcium hydroxide, the time of treatment varying with the strength of alkali used and nature of the fibrous substance. The fiber is then washed previous to making into roofing felt. No. 285,687—Felt paper is produced by blending flax tow fibers which have been cooked by a pentasulphide process with felt paper-making material which has high saturating qualities and forming a sheet of felt paper containing these components.—A.P.-C.

Process and Apparatus for Making Metal-Covered Roofing. J. H. Gillis assignor to Anaconda Sales Co. U. S. pat. 1,701,918, Feb. 12. 1929.—A roofing to which has been applied a coating of asphalt in such a manner that the asphalt does not adhere to the felt, is brought into contact with a sheet of metal on the asphalt-coated side. The strip and web are then progressively united by electrically generating heating in the strip at a given point in their travel, the heat being sufficient to soften the asphalt and render it tacky; and then subjecting the whole to pressure.—A.P.-C.

Roofing Material. Andrew H. Irving assignor to The Paraffin Companies, Inc. U. S. pat. 1,705,015, March 12, 1929.—A layer of asphalt-saturated felt is faced on its upper side with a coating of asphalt **and is coated with** coal-tar pitch on its lower side, and is used with an underlying layer of rosin-sized paper faced on the upper side with coal-tar pitch.—A.P.-C.

Making Paper Suitable for Nitration Purposes. Georges A. Richter assignor the Brown Co. Can. pats. 286,458 and 286,459, Jan. 15, 1929.—No. 286,458—A substantially uniform mixture of mercerized cellulose fiber and beaten unmercerized cellulose fiber is run off on a paper machine and the paper nitrated. No. 286,459—Mercerized cellulose fiber is run out on a paper machine into thin sheets. The paper so formed is loose and bulky, but these characteristics may be made less pronounced by incorporating a small proportion of unmercerized fiber, either beaten or unbeaten. The paper is then saturated with a cellulose xanthate solution of sufficient cellulose concentration to yield 1 to 5% of regenerated cellulose, when regenerated in the paper. The paper is then partially dried and immersed in a cellulose-regenerating reagent, e.g., a solution of sodium bisulphate and sulphuric acid to regenerate the cellulose *in situ* in the paper. The paper is washed, steeped, if desired, in a sulphur-removing reagent, e.g., a sodium sulphide solution, again washed, and finally dried. The dry paper is calendered or supercalendered to improve its suitability for nitration.—A.P.-C.

Process of Making Resin-Impregnated Sheets. G. E. Wightman asignor to Bakelite Corp. U. S. pat. 1,703,414, Feb. 26, 1929. —Sheets are formed from a mixture of fibrous material suspended in water with a reactive resin, and after draining excess water from the sheet it is further dried by moving it through a zone of reduced pressure while heating sufficiently to expel moisture without effecting reaction of the resin or lessening its plasticity. —A.P.-C.

Waterproof Paper. Geo. A. Brown assignor to Bennett Inc. Can. pat. 284,746, Nov. 13, 1928.—A furnish comprising 70 parts of waste paraffin paper, together with 30 parts of other fiber is placed in a beater with sufficient water to ensure circulation. The furnish is heated to about 170°F. and beaten 30 min. to disintegrate the paper. About 5 to 20 parts of rosin is then added and distributed throughout the furnish. A 42° Baumé solution of sodium silicate, heated to 210°F., is added in amount to produce the desired dispersion, about 3 or 4 parts of silicate to 1 part of rosin being satisfactory. The silicate solution is beated into the furnish for 30 min. and a dispersion of the paraffin and rosin into fine discrete particles is effected. The furnish is then preferably cooled to about 120°F. Alum (about 30 to 40% based on the weight of the dry sodium silicate) is added. The alum reacts with the sodium silicate to produce a voluminous flocculent precipitate of aluminum silicate, which carries down and fixes the dispersed particles of waterproofing material on the fibers. The furnish is then run off on a paper machine.—A.P.-C.

Paper Having a High Finish or Glaze. A. L. Clapp, assignor to Bennett, Inc. Can. pat. 284,745, Nov. 13, 1928.—A paper having a high finish or glaze may be produced if a dispersion comprising a glazing or polishing wax, such as carnauba, and a wax of lower melting point such as paraffin, is applied to the paper prior to or during the usual calendering operation, after the paper has been dried. The dispersion melts readily at the temperatures of the calenders, penetrates the surface of the paper and permits the paper to be highly polished after the drying operation, by the usual calenders, without the necessity of a subsequent supercalendering or friction-calendering operation. A typical dispersion may be composed of 90 parts of paraffin and 10 parts of carnauba dispersed in sodium silicate solution.—A.P.-C.

Treated Paper for Making Show Cards, etc. G. S. Walpole. Eng. pat. 292,804, Aug. 18, 1827.—In the "cutter-crush" process the paper from which the characters are cut is treated or coated on its underside with a mixture such as paraffin or beeswax, to which Japan wax or cacao butter may be added, and may be sized to prevent penetration of the wax.—A.P.-C.

Transparent Wrapping Material. F. K. Wickel. Eng. pat. 294,463, July 23, 1927.—Material such as thin sheets of cellulose derivatives or paper rendered transparent by the use of resin is treated with a mirror-forming substance, e.g., rubbed with bismuth oxychloride. The mirror effect may be preserved and interference effects produced by coating with a dilute solution of resin. —A.P.-C.

Paper Suitable for Cigarette Mouthpieces. Wickel and Co. Eng. pat. 294,492, July 23, 1927.—Paper such as thin tissue paper is treated with a water-insoluble material such as a natural or synthetic resin or cellulose derivative, which may serve as a carrier for a metal-reflective iridescent face.—A.P.-C.

Section of the

COST DEPARTMENT

of the

American Paper and Pulp Association

Edited by T. J. Burke C. A. Director Cost Dept.

Making Management Think*

By George P. Ellis, C. P. A., Geo. P. Ellis & Co, Chicago, Ill.

There are two suggestions in this title. The first is that management—that is, the executive—does not think; second, that even if he does think, he must first be made to do so.

Now, if "thinking" on the part of the executive carries with it merely the idea of giving his business his time and attention and of occupying his mind with its problems, there is no occasion for this title or the questions which it suggests. But it is obvious, of course, that this is not what is meant. The fact is, that many business men occupy their minds so completely with their business that they cannot "think" about it.

"Thinking" is a constructive process of the mind. It comprehends the orderly consideration of all related factors of a given proposition in such a manner as to lead to a definite conclusion. If we merely permit our minds to be occupied with a problem in a desultory, disjointed, distracted, disorderly fashion, that is not thinking, because it leads to no definite conclusion.

One definition of the verb "think" given by Webster is "to exercise the faculties of judgment, conception, or inference, as distinguished from simple sense perception." Note especially that it is distinguished from simple sense perception—from merely being aware of certain conditions or facts without applying the processes of thought to draw conclusions from those known facts or conditions.

Let us then define "thinking" by the business executive, as we are now using the term, to be "the orderly and logical consideration of all ascertainable, important facts, either directly or indirectly related to the business, for the purpose of determining:

1—What should be done that is not being done;

2—What should be done that is being done; and

3—What is being done that is sound and should be continued."

Coming back now to our subject and the two questions which it suggests, it must be said that many business men do not think, and that if they are to think they must be made to do so. Why do they not think? Our definition rests upon the consideration of facts, and many executives do not think because they do not know the facts. Some executives may not think because they have the type of mind that is impatient of detail and they have not had the facts presented to them in a way as to stimulate their thinking. Others may not think simply because they are mentally lazy.

The first conditions are usually chargeable largely to the accounting and statistical departments. It is the funcion of these departments to ascertain the facts, but, having done so, they must present these facts in such a manner as to make them readily usable as a basis for thinking.

The real function of all accounting work is to render a service to business management. This service lies in placing before business executives the most complete information possible on their affairs analyzed and interpreted so as to be readily understood and used effectively in guiding and controlling their operations more economically and profitably.

A big business man said that as much as he hated statistics, he could not do without them; a point of view which indicates the appreciation which constructive analysis warrants without the danger of becoming so statistically minded that the statistics themselves are looked upon as an end in themselves and not merely a means to that end.

We have too often been such slaves to tradition and have had such a narrow point of view that we have tried to make business conform to our narrow conception rather than to adapt our methods to the needs of expending American business. The beginning of accounting service, of course, lies in the proper keeping of accounts which is however merely the means to an end. We should not burden management with a lot of unimportant statistics but should rather present facts in a way that will cause the executive to think intelligently regarding his business. I recently heard a speaker make the statement that we should "base our thinking upon the will to know the truth; that we shall think intelligently according to an adequate number of facts; that we shall think clearly, according to the laws of logical reasoning; that we shall develop the power of imagination or vision; and that we shall base our thinking on sound economic laws."

This question of hide-bound tradition is extremely important in connection with our subject, as accountants are notorious for their tendency to follow custom and precedent. In fact, they probably run a close second to the army in this particular.

The story is told of Abraham Lincoln that in 1832, at the time of the Black Hawk War, he was drilling him men and they were marching with twenty men fronting in line across a field when he wished to pass through a gate into the next field. "I could not for the life of me," said Lincoln, "remember the proper word of command for getting my company 'endwise' so that it could get through the gate, so, as we came near the gate, I shouted: 'This company is dismissed for two minutes, when it will fall in again on the other side of the gate.'"

Executives Should Be Studied

Accountants should study the executives to whom they are responsible to learn as much as possible about their personal idiosyncracies, modes of thought, etc., as these are important considerations in preparing accounting and statistical data. If the chairman of the board of directors can better understand a balance sheet constructed in some peculiar way, what does it matter if there is no accounting authority for such a form of

* Address delivered before Interstate Meeting of the Kalamazoo Local Division of the Cost Department of the American Paper and Pulp Association, at Kalamazoo, Mich., on May 23, 1930.

balance sheet, so long as no fundamental principles are violated?

The late John H. Patterson, of National Cash Register fame, was noted for his idiosyncracies of temperament. He detested trivialities and petty details. It is said that when Stanley Allen, now vice-president of the company, went to work in the accounting department as a young man only a short time out of college, he discovered this trait of Mr. Patterson and acted accordingly. In preparing the monthly balance sheet for submission to Mr. Patterson he adopted the practice of stating the amounts in even thousands in order to make it more easily read and comprehended. This bit of common sense greatly appealed to Mr. Patterson and, to use an old phrase, Mr. Allen's "fortune was made."

The point I mean to make is that the accountant must not only furnish the management with facts which can be used as the basis of thinking, but they must be furnished in such a form that they will be used. It is not for the accountant to say that the executive must adjust his mind, and mental processes to the methods of the accountant. So long as no basic accounting principles are violated, the executive has a right to expect the accountant to conform to his wishes in the matter of the form in which data is presented. Or if he has no definite or expressed opinions, then the accountant should study him to determine what forms of statements, reports, graphs, etc., appeal most to him and are most stimulating to his thinking.

If management is courageous enough to know the truth and face facts and think intelligently it will welcome the facts that only the accountant can furnish. In order to present these facts to the executive in a proper manner, the accountant must take into consideration changing economic conditions and must be a constant student of economics in order to foresee changes in the economic order which will vitally affect the business. Only as he is a student of economics can he interpret the trends which he develops from his accounting data.

Problems of Business Management

The principal problems of business management may be briefly summarized under the following headings:

1—Kind of product
2—Marketability or field of demand
3—Competition
4—Financing

While we, as accountants, cannot dictate as to the product itself, nor can we govern in any way the marketability thereof or the competition to be met, yet we can do much towards the solution of these problems by such a study and presentation of cost and financial analysis as will enable the management the better to meet present day keen competition.

It seems to me that while a comparison of one period, department, or unit with another will yield much valuable information, yet greater benefits are obtained by the adoption of what one might call "ideal" standards and a comparison of actualities with this standard. The principal standards are:

1—Sales quotas
2—Production costs
3—Financial budgets

So far as a comparison of actual sales with the quotas set is concerned, there would not ordinarily be any difficulty but in connection with these reports a statement of unfilled orders, current contracts and future probabilities will furnish much valuable material for the application of the budget. In the case of a widely marketed commodity an analysis and study of the sales by territories on a per capita basis will often prove of value in indicating sales weaknesses. There are, of course, other analytical bases which may be used, many of which will suggest themselves to you.

This leads us into a consideration of the problems inherent in any well thought out program of production and costs, a subject far too large to be dealt with within the confines of a short talk such as this.

The production program is, of course, dependent upon the following basic factors:

1—Demand
2—Capacity of plant
3—Availability of material
4—Local labor conditions
5—Financial requirements

Any statistics predicted upon past performances which could be used as an indication of future requirements (especially where such detail could be given by units, grades, models, etc.) together with details of contracts and orders already to hand, will be invaluable in outlining such a program.

By the help of a carefully prepared financial budget and reliable costs it should not be difficult to arrive at an approximate minimum operating cost from which could be prepared a graphic chart showing the minimum output required to cover expenses.

Availability of Materials

As to the availability of materials, the question of the source of supply is a very important one with grave dangers, should the source be limited.

In cases such as those where rubber or leather is fabricated, the commitments should be constantly compared with the current market quotations in order to determine the efficiency of the purchasing department.

Similarly a study of the quantities in the inventory will often disclose weaknesses in this department, evidenced by unreasonably large quantities of some component parts and shortages in others.

Of course, I need not stress to you the importance of devising ways and means of keeping waste and scrap to a minimum.

If the costs of materials are mounting, it will be necessary to undertake a thorough study and research on the whole matter of sources of material and storage and control, and consequently study out ways and means of preventing waste and reducing scrap to a minimum. In fact, the business man who has been willing to think along this line has found that what was once a dead loss has been developed into a by-product that has been very much worthwhile.

Oftentimes the by-product has become even more important than the principal product. The chemist, working with the business man, has developed many scrap items into very profitable by-products. A very fine illustration of this is cotton seed, which, with the aid of the chemist, has been developed into many important products. The first thing the chemist did was to take the linters off the cotton seed. These are too short to spin but by treating the cotton linters with nitric acid it is possible to manufacture them into guncotton and by dissolving guncotton in a mixture of alcohol and ether, collodion is produced. This collodion can be spun like silk and is used for making ladies' dresses. The chemist then ground the cotton seed and squeezed out the oil, and by a chemical process relieved it of impurities and got Wesson Oil.

There are a great many other similar illustrations which could be related of how waste materials have been made into a valuable by-product.

The problems presented in labor, materials, and overhead, in keen competition have made it necessary for a manufacturer not only to determine his manufacturing costs but he should constantly know the cost of doing business. The system should be like an X-ray picture, bringing to light internal conditions.

Successful Business of Future

Edward A. Filene, in his book, "The Way Out," makes the statement: "The successful businesses of the future will be the businesses that improve the processes and reduce the costs of production, rid distribution of the indefensible wastes, bring the prices of the necessities of life lower and lower, shorten the hours of labor and enlarge the margin of leisure, eliminate periodic depressions and recurring unemployment, limit the area of the industrial battlefield, and enlarge the floor space of the council chamber, produce better and better working conditions, pay higher wages and increase the comfort and prosperity of both employees and customers."

The business man can carry out such a program only to the extent that he is constantly making the study of every phase of his business and he can only be made to think regarding these things when the facts regarding his business are properly interpreted and presented to him. Someone has said, "What you are today is the result of what you thought, said, and did yesterday, and what you will be tomorrow is the result of what you are thinking, saying, and doing today. Consequently, do not dissipate one-third of your force and energy by worrying about the past, and an additional one-third fretting about the future but concentrate your full force and energy on the problems you are facing today."

I think this can be applied to a great many business men; they do a lot of worrying and fretting because the results in the historical data presented to them are not what they had hoped for, but they do not do anything about it. If there is one thing that we need in American business life it is the ability to see clearly and judge soundly and then to act fearlessly. We do not, broadly speaking, possess these qualities generally. We need to develop more imagination. It has been said that the imagination is the royal faculty in men. In the popular mind it is frequently associated with things that are impractical or impossible of attainment. One of the definitions of the dictionary is that it is the faculty whereby we combine the materials of experience in new forms for new purposes.

Someone has said that in order to be successful we must stop looking at things and begin seeing them. Another has said: "To be successful, we must visualize our opportunities."

The burden of knowledge that the modern business man must carry for his own business is almost overwhelming. Business is so complex and difficult that in order to succeed, the business must be prepared to meet these conditions. The accountant must be of greater assistance to management in the presentation of information in a way that will consume the least possible time of the executive in absorbing the facts.

Trouble With Average Accounting System

The great trouble with the average accounting system is, that it merely records the facts regarding the operation and, in the great majority of cases, this material is merely filed away unless there happens to be an exceptionally good run, when the foreman is likely to brag about it for a long while, but no one ever hears about the dozens of bad runs. The whole system merely records what has happened and does not show what is happening or suggest the immediate correction of inefficiencies. It is not sufficient that executives should know that expenditures are excessive; they should be supplied with information to determine just where these excessive expenditures occur. The manager should have before him detailed reports showing expenditures necessary to produce articles and with this information he is in a position to know the variables and put into operation the movements necessary for their satisfactory control.

Standards and pre-determined costs have a goal. The old cost methods lacked plan and foresight.

The cost system is similar to the nerve system of the body, its function being to transmit conditions in the entire plant to some central individual or body. Keen competition calls for the highest degree of understanding of the exact conditions in the business and it is not enough to merely check these up for possible errors. New obligations may have been incurred based on reasonable expectations, but which will later prove not to have been for the best interests of the concern and the proper cost system should bring out these facts. "Knowledge is power" is as true in accounting as in any other line of endeavor. We have been taking things too much as they come and have not been working to a definitie goal.

It will be necessary for the accountant to have more of the point of view of the executive than he has generally had in the past and it is quite important that the management have a sympathetic interest in the plan developed. It has been said aptly that an organization is the lengthened shadow of the man at the top, so if he is one of the type that imagines he does not need costs, it is a waste of time to undertake the installation until he has been converted.

Foundation Should Be Laid Carefully

There are many things in general that can be used in order to get him thinking favorably of the system. The store room system may have to be revamped, the account structure rearranged, and a detailed plant ledger built up. If you have all these worked out and are simply swinging over to standard costs, then it will be necessary to lay your foundation carefully. In organizations where it has been the custom to compare costs of individual performances, it usually happens that exceptional performances are held out to the light while the bad ones are forgotten. Standard costs will reverse this situation and will bring to light for closer examination the poor performances as well as the good ones and by means of monthly summaries it will be possible to get a true picture of each department's entire activity and it will not be necessary to depend upon certain executives' opinions regarding efficiency which have been based on the individual good or bad performances. It is a much better comparison and present a better picture of the trend of the cost if the actual cost of production is compared with the standard that has been set, than it is to show it in comparison with previous months' production or the production of the corresponding months of the previous year.

One of the first problems in designing the system is to establish some unit of measurement. Under the standard cost plan there may be a large number of units of measurement and these brought together show the standard costs and are used throughout the system as a unit of measurement. Standards are established for each item manufactured, the aggregate standard costs of all the articles manufactured during a given period are compared with the actual costs for that period; this furnishes a ratio of actual cost to the standard cost as a whole. The application of this ratio to the standard costs of each article will give the current cost of the article.

A cost system, in order to secure the best results, should, among other things, enable the executive to know the departments or operations which require attention and thus enable him to reduce costs. It makes possible a comparison of the actual and ideal costs by operations. The analysis of these differences enables the management to concentrate on them and inaugurate methods necessary to correcting them.

Standards should be set only after a thorough study has been made of the material, scrap, labor, and overhead distribution. The comparison of standards with actual costs from time to time will place before the management the stories of the efficiency or inefficiency of the plant operations which are hidden in the cost figures. This determination can be made only by a thorough analysis of operations, comparing each cost element with the standard cost based upon the best performances that can be obtained by the methods in use at the time.

Labor Costs and Conditions

As to labor costs and conditions, it would be well to analyze carefully the local labor market before any comprehensive program is outlined and, should the costs in this connection appear to be mounting, the question of the various wage incentive plans should be considered in order to encourage a maximum of effort. A prominent industrial engineer said, "Until management really gets down to wanting to understand men and changes its attitude toward men, it will never cease to have trouble with men." It is said that heart power in business is nothing less than man power and man power is the biggest problem with which management has to deal.

Another man has said, it is necessary in business to "define your problem, analyze your problem, seek the facts, devise the one best method, find the person best fitted, teach that person best fitted the one best method, plan carefully and win cooperation." The business man will be brought to the realization of

the importance of the whole study of human relations when he finds that he is not getting the best results from his labor.

With the growth of business into larger units through mergers or acquisition of other plants, we are confronted with a serious problem without executive groups. Men who have been at the head of smaller operating units now become merely one of the cogs in the machinery of the larger organization and it will be necessary to work out incentives to keep these men interested and on their toes.

A study of our labor problem will also get us into the whole field of welfare work. We will only get the maximum efficiency to the extent that we have a happy, well housed, properly clothed, and sufficiently fed group of families represented by our employees. Their minds must be relieved as much as possible of the fear of unemployment and the lack of means to support at the time retirement becomes necessary. This latter point raises the whole question of pensions and retirement allowances. Our reports should make the executive think on this most important problem.

Ever Increasing Overhead

The matter of an ever increasing overhead, if properly presented, will cause management to open up a great field of thinking and research that will get into the whole activity of business. One of the first things he must determine is whether he is selling enough goods to run his plant up to normal capacity. If not, it will be necessary for him to study the whole matter of the market for his product and to study his advertising and sales methods to determine whether it is possible to build his sales up to the needed volume or whether it will be necessary for him to reduce his organization down to the volume that he can reasonably hope to attain. I think that a careful analysis in a number of industries would reveal the fact that a greater production capacity has been developed than the total possible market can support. In other words, the saturation point has been reached and it is absolutely impossible for every concern to operate up to a reasonable normal capacity, and to try to reduce overhead percentages by increasing volume will drive the industry to price cutting methods that eventually will make it impossible for anyone to make a reasonable profit.

This study will also open up the whole question of plant capacity, production methods, and overhead organization. It will also lead him to a study of the overhead costs to see whether it is possible to reduce the actual expenditure for overhead items by more careful control and supervision. It will prompt the study of equipment to determine the efficiency or inefficiency of the equipment. It is sometimes more economical to scrap equipment that becomes so old that the upkeep costs and the reduced efficiency together make a very expensive unit of equipment. Some of these studies should bring to light the facts of changing economic conditions which will vitally affect the industry. The business man must venture into the unknown, keeping abreast of the changing conditions that foreshadow important developments. It is only as we work to a plan and set a goal and standards to work to that there is any possibility of noting the important variations that will arouse the business man's interest sufficiently to make him think constructively and to take the necessary action to correct unfavorable conditions.

Every Phase of Business Should Be Studied

I have attempted in this short talk to show the accountant's work, if properly conducted, will produce statistics, trends, and comparisons which should arouse the business man to study every phase of his business as well as the economics which underlie the whole fabric of business and, to a large extent, the whole accounting system; recorded facts which would be so analyzed and presented in such a manner as to enable the business man to go back and study the causes which produce the given facts and knowing the causes, he is in a position to introduce the changes necessary to correct untoward tendencies. When we as accountants view our work in this manner we will become an important factor in management rather than a necessary evil, or, at best, something of no particular importance one way or the other.

There was a certain spinster lady who had lived her allotted three score and ten years, with a few years extra allowance, and at last went to her reward. This lady had inherited as a young woman sufficient means to furnish her with all the necessities and comforts of life which she required and had lived her entire life in what might be called a state of innocuousness. That is to say, she did no one any harm nor, for that matter, any particular good. She was simply what might be called a much respected maiden lady.

After she died, it devolved upon some of the citizens, since she had no relatives, to see that she was properly stored away and they called on a young newspaper reporter to write an epitaph for her tombstone. This young fellow was a sports writer and after giving long thought and concentration to the subject, he produced the following:

Here lie the bones of Nancy Jones
For her, death held no terrors.
Born a maid, she died a maid;
No hits, no runs, no errors.

Many accounting systems can well be compared to the life of Nancy Jones. They never do any harm nor, on the other hand, do they ever accomplish any particular good. It is this sheer innocuousness that sometimes seems to cause the damage. They produce no bad results and thereby escape drawing any particular attention. Let us, as accountants, inject some life into the game we are playing and make some hits, and runs, even at the risk of making some errors.

I. P. Mill at Pyrites to Resume

[FROM OUR REGULAR CORRESPONDENT]

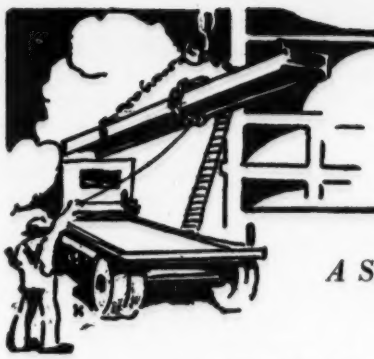
PYRITES, N. Y., July 7, 1930.—It was announced this week that the local branch of the International Paper Company would resume operations immediately for an indefinite period following orders from the main office. Under the previous schedules four machines were operated but from now on until further notice only half of the equipment will be utilized. The working force of 375 men will also be cut to some extent.

A few days ago orders were received here to close down the entire plant on July 1 but W. N. Baker, superintendent, made a visit to New York and after a conference with head officials it was decided to modify the earlier instructions. During the next few weeks new roofs will be placed on two of the units and it is understood that plans call for improvements to plant equipment. It was learned that no decision had yet been reached relative to operations at the Ogdensburg terminal which handles the pulpwood used at the local mill. Pulp shipments are continuing to be handled at the terminal but only recently it was announced that these would be reduced and there is a possibility that it may be closed later in the season.

An authority in close touch with the local situation claims that the only reason the company has kept the plant running for some time is because the tariff prevented the importation of Rangely paper with clay ingredient. A thriving community has grown up around the mill and the announcement of resumption of operations was welcome news. Because of the activities at the plant in recent years many families have located in this section and only recently a modern new high school building was constructed through an issue of bonds.

Terre Haute Paper Co. Resumes

INDIANAPOLIS, Ind., July 7, 1930.—With the reopening of the east plant of the Terre Haute Paper Company, Terre Haute, Ind., business looks a little better. The plant started with 50 men and officials plan to increase the personnel. The plant has been closed, with the exception of one week, since last February.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

New Haven, Conn.—The National Folding Box Company, James street, has approved plans for a new addition to plant to provide for considerable increase in present capacity, consisting of a four-story brick and steel unit, 83 x 178 feet, estimated to cost about $175,000, with machinery. General contract has been awarded to the E. & F. Construction Company, 94 Wells street, Bridgeport, Conn., and foundations will begin at once. Fletcher-Thompson, Inc., 542 Fairfield avenue, Bridgeport, is architect and engineer.

Baltimore, Md.—The Hinde & Dauch Paper Company, Sandusky, Ohio, is said to have awarded a general contract to Otto Randolph, Inc., 53 West Jackson boulevard, Chicago, Ill., engineer, for the erection of its proposed new mill on tract of land recently acquired on Biddle street, near Loney's lane, Baltimore, and work on the unit will be placed under way at an early date. It will be one-story, 240 x 480 feet reported to cost close to $300,000, with machinery. The plant will be equipped primarily for the manufacture of corrugated shipping containers.

Toledo, Ohio—The Princess Paper Products and Novelty Company, 763 Summit street, manufacturer of paper novelties, punchboards, etc., is said to be planning rebuilding of portion of plant recently destroyed by fire with loss estimated at close to $25,000, a portion of which is understood to represent stock.

Lynchburg, Va.—The John Heald Company, Lynchburg, is planning the installation of equipment for the reclaiming of the majority of the sulphate waste which has been discharging into the James River from the mill, and which has caused the city officials at Richmond to become concerned about its water supply from this stream, and negotiate with the company for the improvement. A suit for an injunction by the municipality has not been discontinued. It is understood that work will be placed under way at once.

Chicago, Ill.—The Vortex Manufacturing Company, 421 North Western avenue, manufacturer of paper cups, etc., is holding to a capacity schedule at its plant, and reports incoming business increasing to an extent to assure this basis of output for an indefinite period. Sales and net profits in May, the last month for which figures are available, were in excess of any previous month of May in the history of the company. P. T. Potts is president.

Brooklyn, N. Y.—The Superior Corrugated Case Company, recently organized by Benjamin Grossman, 1683 53rd street, Brooklyn, and associates, with capital of 200 shares of stock, no par value, is said to be planning the early operation of a local plant for the manufacture of corrugated paper cases and containers, as well as other kindred paper goods. Extensive output is proposed. Benjamin Pollack, 18 East 41st street, New York, is interested in the new company, as is Isidor Grossman, 1747 Sixtieth street, Brooklyn.

Cornwall, Ontario—The Howard Smith Paper Mills, Ltd. are running on a reduced schedule at their different plants, compared to this time a year ago, when the mills were operating at close to capacity. It is understood that present output is expected to be maintained for some weeks to come, and is considered satisfactory in view of the quieting down of trade.

Mobile, Ala.—The Southern Kraft Company, Mobile, a subsidiary of the International Paper Company, 220 East 42nd street, New York, is reported to have closed negotiations for the purchase of a tract of about 43,750 acres of timber land in La Salle Parish, Louisiana, as well as other lands in different parts of the state, including Caldwell, Morehouse and Ouachita Parishes. It is understood, also, that paper mills are to be acquired in Louisiana, Alabama and Mississippi, to be used in connection with a general expansion program of the company. The company has work under way on its new mill at Panama City, Fla., as recently reported in these columns, and will push this project to completion. The mill will be equipped for an initial capacity of 200 tons of kraft papers per day, to be increased to twice this output at a later date. The parent company, International Paper Company, is reported planning for the early establishment of a new mill at Mobile, Ala., where a paper-making unit is operated, to be used for the manufacture of paper bags. It is understood that the proposed plant will represent an investment of over $250,000, with machinery, and will be operated as a mill of the Continenal Paper and Bag Corporation, another subsidiary, which maintains a plant for kraft paper bag production in conjunction with a mill at Bastrop, La. This latter plant is said to be running on a capacity schedule, with output devoted largely to grocery bags, and which, likewise, will be produced at the proposed new mill at Mobile. With the completion of the Panama City mill, noted, the International company will have a gross output of about 1000 tons per day of southern kraft paper and paperboard at its different mills.

St. Paul, Minn.—F. H. Peavey & Co., Minneapolis, Minn., manufacturer of insulating board products, has secured a controlling interest in the Flax-li-num Insulating Company, St. Paul, with local plant for manufacture of thermal insulating materials. The acquiring company will be active in the management of the last noted organization in the future. It is proposed to maintain the St. Paul mill at present location, with probable increase in output at a later date. H. B. Harden, formerly connected with Johns-Manville, Inc., New York, has been appointed general manager of the acquired business.

Oakland, Calif.—The Sunset McKee Salesbook Company, 2101 Livingston street, manufacturer of commercial paper goods, etc., has approved plans for a new addition to its plant for increased capacity, to be one-story, reported to cost about $18,000. Work will be placed in progress at once by the Austin Company of California, Inc., Ray Building, Oakland, which has secured the general contract for the unit.

San Francisco, Calif.—In connection with recent report in these columns regarding applications for permits for hydro-electric power plants in Alaska, by the Crown-Zellerbach Corporation, 343 Sansome street, and George T. Cameron, head of the *San Francisco Chronicle*, Fifth and Mission streets, it was

inadvertently inferred that these applications were for co-operative work, when such is not intended. The Crown-Zellerbach organization proposes to develop its hydro-electric power resources in the vicinity of Ketchikan, Alaska, where a gross output of 45,000 to 50,000 hp., is expected to be developed. This work will be carried out with permission secured, in connection with a new pulp and paper mill in the immediate vicinity, the entire project to represent an investment of close to $15,000,000. The Cameron enterprise, as set forth in previous item, will be carried out in the vicinity of Juneau, Alaska, with hydro-electric power development on Dorothy, Crater and Long Lakes, with estimated installed capacity of 81,000 hp. This plant is estimated to cost $4,000,000, while the paper and pulp mill project will represent an investment of approximately $10,000,000 additional.

St. Louis, Mo.—Paper Products, Inc., St. Louis, recently organized by E. D. Poenman, 1825 Arsenal street, and associates, with capital of $90,000, is said to be planning the early operation of a local plant for the manufacture of a line of paper goods of various kinds. Large capacity is to be arranged.

Burlington, N. J.—The Neidich Process Company, St. Marys street, near East Broad street, manufacturer of processed paper materials, has awarded miscellaneous completion contracts for its new plant addition, now under way, previously referred to in these columns. The unit will be three-story and basement, and a one-story addition on present factory, reported to cost over $80,000 with equipment.

Everett, Wash.—The Puget Sound Pulp and Timber Company, Everett, a Delaware corporation, has arranged for an increase in capital from 190,000 to 350,000 shares of stock, no par value, a portion of the proceeds to be used for general financing, mill operations and improvements.

Three Rivers, Que.—The St. Lawrence Corporation, recently organized to take over and operate a group of pulp and paper mills, has completed arrangements for the acquisition of the various properties, which include the St. Lawrence Paper Mills Company, Ltd., with mill at Three Rivers; the Brompton Pulp and Paper Company, Ltd., Bromptonville, Que.; and the Lake St. John Popew and Paper Company, Ltd., with mill at Dolbeau, Que. These plants have a rated daily output of about 1,000 tons of news print, 100 tons of kraft papers, and 70 tons of boxboard. The mills are operating on regular production schedules, and will continue on that basis indefinitely. It is understood that no changes are completed at the different plants.

New Companies, Etc.

Milwaukee, Wis.—The Pioneer Waste Paper Company has been incorporated to deal in paper stocks, and will operate a local warehouse. The company is headed by Louis Schlaeger, 354 South Water street, Milwaukee.

Newton Falls, N. Y.—The Newton Falls Paper Company has filed notice of merger with the St. Lawrence Paper Corporation, and the consolidated organization will operate under the first noted name.

Albany, N. Y.—The National Paper Products Sales Company, a Nevada corporation, has filed notice of organization to operate in New York, with capital of 100 shares of stock, no par value.

New York, N. Y.—The Wooster Waste Paper Company, has been incorporated with capital of $20,000, to deal in paper stocks.

Art Paper Box Co. Incorporates

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, July 7, 1930.—It is reported that satisfactory progress has been made by the Art Paper Box Company which recently was incorporated by Dayton men to do business in Miamisburg, 10 miles south of this city.

The incorporators were John B. McClary, Joseph Janow and John G. Romer, a lawyer, located in the American building in Dayton. The incorporation was for 200 shares of no par value.

The company completed plans for the manufacture of high-grade boxes McClary formerly was identified with Dayton Paper Box Company, and is well-known in the trade.

Presentation to James Scott

GEORGETOWN, Ont., July 7, 1930.—On Saturday evening, June 21, 1930, the employees of the Provincial Paper Mill gathered at the Canadian Legion Hall to pay their respects to James Scott, boss beaterman, who is retiring from business at the end of the present month.

Mr. Scott holds a unique position in the paper industry in Canada, and, it is believed, in the United States as well. He has been employed in the industry and in the same mill for the past sixty-seven years. He commenced work with the mill when it was known as the Barber Paper Company, at the age of ten years, and has remained in the same mill ever since. He has lost practically no time from work during that period and has never had a serious illness.

The banquet and presentation on Saturday night came as a complete surprise to Mr. Scott. He received an invitation to be at the hall at 9:30 o'clock and when he arrived he was welcomed by sixty of his fellow-workers, and was conducted to his chair at a gaily decorated and flower-laden table. Ed McWhirter, superintendent of the paper mill, acted as toastmaster and after telling Mr. Scott the purpose of the gathering, gave a short address reviewing Mr. Scott's career and also expressing his own personal feelings at losing him.

James Costigan then read an illuminated address to Mr. Scott, after which Charles Hoare presented a gold-headed ebony cane and a walnut smoking stand on behalf of Mr. Scott's fellow workers. Mr. Scott was quite overcome with emotion and in replying said that, while he knew that every man in the mill was his friend, he had no idea that they would show their friendship in such a wonderful manner. He thanked the gathering from the bottom of his heart and said that, while he is retiring from business, he does not intend spending his time in an arm-chair, but will be found at the bowling green every day having a game with the boys.

Speeches of congratulation were made by W. V. Grant, Charles Burnside, John Garvin and John D. Kelly, all of whom expressed the pleasure they have had in knowing and working with Mr. Scott. The refreshments were then served and many toasts were drunk to Mr. Scott's continued good health.

The gathering broke up at midnight with the singing of Auld Lang Syne, and all went away feeling that the evening had been a success.

Wiping Cloth Dealers to Meet in Chicago

Dealers, washers and importers of wiping cloths from all sections of the United States and Canada will meet at the Congress Hotel, Chicago on Monday and Tuesday, July 14 and 15 for the purpose of organizing an association embracing the above mentioned groups, which organization will operate as a Division of the National Association of Waste Material Dealers, Inc. There will be general sessions throughout both days. There will also be group meeting in which dealers, washers and importers will meet separately to consider some of the problems facing the industry.

The new tariff just passed is going to bring changed conditions and the Chicago meetings are going to furnish an opportunity for a most thorough consideration of problems and conditions which face the industry at the present time. The Organization Committee has been hard at work preparing plans to be submitted for approval at the organization meeting, which if adopted are sure to prove of substantial value to those in the industry.

In spite of the poor business conditions now prevailing, the interest in this new organization is so great that a large attendance is already assured. Detailed information can be obtained by addressing Chas. M. Haskins, secretary of the National Association of Waste Material Dealers, Inc., Times Building, New York, who is acting as secretary of the organization committee.

Present and Future of the Paper Industry

By S. L. Willson, Pres. American Writing Paper Co., Inc.

We have just completed six months of 1930 business. In dealing with different commodities we find experiences and results have been tempered with the conditions applying to our particular commodity and each of us would tell a different story and perhaps advance good reasons for those differences.

During the six months' period, I have tried to analyse causes and effects, and have developed some facts that are startling because from them it becomes apparent that these facts are either not known or, if known, are not being applied.

Raw Materials and Labor Costs

Let us first consider raw material and labor costs. The following are the records of our own company which can safely be applied to the entire paper industry.

INDEX FIGURES

	July 1, 1914	July 1, 1930
Wood pulp	100	146
Rags	100	173
Shavings	100	145
Supplies	100	153
Chemicals	100	150
Weighted average, all materials	100	154
Labor	100	232
Weighted average, labor and materials	100	170

The above index figures are computed from prices for current orders, and are lower than those covering contract purchases. In addition to these increased costs of raw materials and labor, a Federal income tax has been established, and state, county and city taxes have about doubled.

Dun's index number for general commodity prices at this date is about 175 as compared with 100 in 1914.

News Print

Now let us take news print—In 1914 it was selling for $2.75 to $3.00 per cwt. Compare that with present day price of 3 cents to 3¼ cents and you will see it is out of proportion to either Dun's commodity index figure of 175 or to the index cost of 170 for materials and labor for the paper industry. It is necessary, however, in making this comparison, to take into consideration the lower cost resulting from wider and faster running machinery—but making due allowances for those lower cost factors—the present price of news print does not harmonize with the present net cost—and certainly should be sold at higher than the prevailing prices. The present low prices are doubtless due to competitive conditions—to over-capacity and over-production. With an over-capacity of more than 20 per cent—with the over-production and no market for the excess—with some mills attempting to run its equipment continuously, there can be no hope for stabilized production, consumption or for adequate return to the manufacturer.

Take another case—kraft paper. Apply the present commodity index costs and see where you land. You will find a condition even worse than that of news print. Realization of this condition evidently was recognized, and resulted in a recent advance of ¼ cent per lb. This action is certainly to be commended. In 1914 the price was around 4 cents per lb.; today it is around 3½ to 3¾ cents per lb.—actually lower than pre-war prices—yet with raw materials and labor decidedly higher.

Take another case—book paper. What justification can there be for the present prevailing prices for book papers—in the face of the present higher costs for materials and labor?

Take another case—box boards. You have the same sad story.

And yet another—sulphite bonds. Apply the same process of reasoning—and then compare present prices with those prevailing in 1914—and see where you get.

There must be something wrong with merchandising. Service is being offered without charge and merchandise is being given away. Quality consciousness seems to have been lost—along with salesmanship, and the law of the jungle is being applied to the detriment of consumer, middleman and manufacturer.

In a market such as exists today—everybody is hit either directly or indirectly. You can't separate the interest of consummer, merchant or manufacturer—What affects one, affects all. The consumer wants to make money—so does the merchant and the manufacturer—and each wants both the others to profit through their business relations. It's certainly poor business to sell below cost. It's almost a crime if you keep it up when there are legal preventatives. I sometimes wonder if extreme selfishness is not shown, when one deliberately goes out and tries to get more business than conditions warrant—based on knowledge of over-capacity and consumption. (A better remedy is smaller production, with resulting stabilization.) If we succeed some one not only loses an order, but loses his head as well, and at once determines to get even, with a general demoralization of the market on that particular grade, with the usual sympathetic influence upon other grades. What we need is mass stabilization, and less of gross production.

Time To Use Reason

If there was ever a time when we should keep a cool head and apply the rule of reason and apply real business principles, it is now. Because of the fear of what some one may do in the way of recklessly reducing prices, there has been a slowing up in buying—even the hand-to-mouth buying of the past eight years has been curtailed—making the present cost of doing business more burdensome than heretofore. There is no justification for lower prices; on the contrary—any one who has knowledge of the real facts will have to admit that the prices on the grades above referred to should be advanced to prevent continuous losses to the manufacturer. A falling price level is the forerunner of lower production and the consequent slowing up of business.

Change in Conditions Soon

In my opinion we shall soon see a change in general conditions. Stock market prices have probably reached the full liquidation point. Most of them are about on the basis of 1928, which prices can be considered as representing fair asset values. The Tariff Bill has been passed. The protests and threats of reprisals against it are practically spent. There is nothing in the Tariff Bill to cause concern, especially with the flexible feature. Two-thirds of our imports come in free—and a comparison of the present bill with the two preceding ones will show that both the previous bills contain average higher rates than the new bill.

The agricultural interests have certainly been carefully nursed and should enjoy their "food." Inventories in all lines are low, and replacements will be necessary. Money rates are extremely low—and will be taken advantage of as soon as that bugaboo "fear" can be eliminated from the public mind, and unemployment conditions will continue to improve. Foreign business conditions are not dissimilar to our own—but with the disturbing international and domestic problems practically straightened out, we should soon start out on a long era of prosperity.

Brotherhood Officials to Visit Quebec

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., July 7, 1930.—Officials of the International Brotherhood of Papermakers plan a visit to the Province of Quebec next week where matters pertaining to the locals in that section will be discussed. The officers will be accompanied on their visit by Arthur D' Aoust, Canadian organizer, who made all arrangements. F. P. Barry, vice president, is spending several weeks in Maine carrying on extensive organization work and it is possible that he may attend the observance of Labor Day at Newfoundland late this month with other officials of the union.

New York Trade Jottings

The National Wallpaper Wholesaler's Association will meet at the Hotel Commodore, New York, on July 21.

* * *

Le-Royer Macfarlane Paper Company, of Boston, Mass., have leased offices in 370 Lexington Avenue, south-west corner of 41st street, N. Y.

* * *

The annual convention of the Wall Paper Association of the United States will be held at the Hotel Commodore, New York, from July 21 to 26 inclusive.

* * *

The exposition of the American Import Trade, which was to have been held at the Grand Central Palace, New York, in August, has been postponed until August, 1931.

* * *

Gerofsky Bros., Inc., dealers in paper mill supplies, of 19 Bond street, New York, have been elected to membership of the Merchants' Association of New York.

* * *

W. W. Birge, former head of the Air Reduction Company, has been elected chairman of the board of Sealed Containers Corporation, New York. The company states that paper milk bottles have been introduced in New Jersey and are now being distributed by Borden Products Company throughout Newark and vicinity. Distribution of milk in these containers has increased from 4,000,000 in 1929 to an estimated figure of 40,000,000 for the current year, the company states.

* * *

Jack Galewitz, president of the Great Atlantic Paper Company, of 77 Wooster street, New York, at a meeting held recently in Montreal, Que., with several large paper mill officials, is reported to have closed a contract for one million dollars worth of news print, book, and bond papers. Part of this paper will be converted in the New York plant, which has a capacity of 20 tons daily. It will be all sold by the Great Atlantic Paper Company to the jobbing trade throughout the country.

U. S. Envelope Co. Moves Tissue Division

SPRINGFIELD, Mass., July 7, 1930.—The United States Envelope Company will begin this week to move its Morgan Tissue Paper Company division from this city to Lititz, Pa., where the company purchased last November a mill that manufactures tissue paper and where it is now completing a new converting plant in which several hundred thousand dollars is invested. From 100 to 125 persons have been employed by this division in this city.

In announcing plans for the change E. V. Johnson, vice-president and general manager of the company, said that many of the employees of the division have been transferred to other local divisions and not more than 50 would be released because of the change. Six or eight persons, key men of the division, are being transferred to Pennsylvania. Robert Black, manager of the division, is moving to the new location.

Space vacated by this division, from 40,000 to 50,000 square feet, in the Cypress Street establishment, will be occupied by other branches of the company's activities. The P. P. Kellogg Company division will expand its activities in the manufacture of envelopes and greeting card specialties, and more space will be utilized for warehouse purposes. The Thomas N. Fairbanks division, established more than a year ago for importing and selling high-grade foreign papers, will use more space for its stocks, and merchandising activities. This division has its office in New York city.

The name of the division that is being moved to Lititz, Pa., will be known henceforth as the Morgan Paper Company division. This division has built up a large trade in toilet paper, adding tinted and perfumed lines to the older product.

Crane Co. Celebrates 75th Anniversary

Among the scores of employees of the Crane Company, of Chicago, who journeyed to the home city last Sunday, to celebrate the 75th Anniversary of the founding of the company, as guests of President R. T. Crane, Jr., were the veteran staff of the Quaker City offices and headquarters and its branches with General Manager W. D. Robinson and other branch supply store managers. The Chicago celebration of the Silver Jubilee extended from June 29 to July 3, with gala festivities, including dances, tours of the city, visits to the immense plant of the company and a memorial service at the grave of the founder, R. T. Crane. Those who were united at the celebration were representatives of branch offices and factories from 152 cities including, Sao Paulo, Brazil, London, Paris, and cities in Canada. The Crane Company, which manufactures 33,000 items of plumbing and heating appliances, industrial valves and fittings including a large line used in paper manufacturing equipment of mills was founded on July 4, 1855, by a youth who left the East to take up his residence under Greeley's advice and in the three-quarters of a century of business history has grown from a one-man factory in a tiny log house erected by the founder himself and with his own hands to an immense concern employing 20,000 people and distributing its lines all over the world. At the recent Paper Mill Superintendents Association, souvenirs of the Crane Company's 75th anniversary were distributed including automatic pencils and leather memorandum books containing good wishes and greetings for the occasion.

J. & J. Rogers Co. Gets Verdict

[FROM OUR REGULAR CORRESPONDENT]

PLATTSBURG, N. Y., June 16, 1930.—A verdict of $19,800.57 in favor of the J. & J. Rogers Company, of Ausable Forks, was granted this week by a jury in Supreme Court in a counter-claim brought against the Keene Lumber Company, of this place. The latter concern brought suit to recover $30,000 alleged to be owed them for consignments of pulpwood sold and delivered to the paper company wihch resulted in the counter-claim. The Rogers Company sued for $52,800 claiming that this sum was due officials for aid in selling lands owned by the lumber concern to the state. A motion to have the verdict set aside was ruled void by Justice Heffernan who directed the attorneys to appear before him at a later date to argue the motion.

Schaefer Heads Southern Association

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 1, 1930.—William N. Schaefer, vice president of the R. P. Andrews Paper Company, this city, was elected president of the Baltimore and Southern Paper Trade Association at its annual meeting held last week at the Annapolis Roads Club near Annapolis, Md.

Other officers elected included: Eugene H. Lazenby, of Baltimore, vice president; and George H. Scrott, also of Baltimore, was reelected secretary. Mr. Lazenby and Harry L. Lengnick, also of Baltimore, were elected delegates to the National Paper Trade Association.

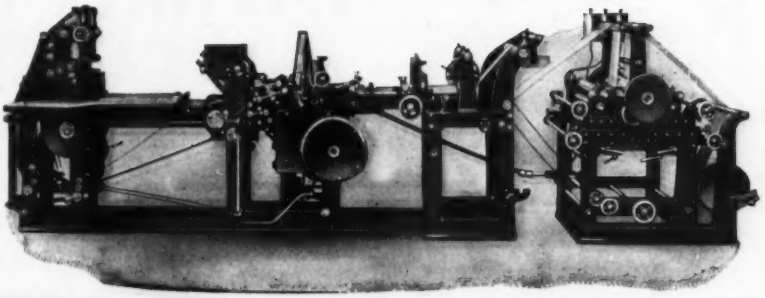
The name of the association was changed to the Baltimore and Washington Paper Trade Association.

Cottrell Paper Co. Operating

In connection with the news article from Ballston Spa, N. Y., announcing the sale of the Kaydeross Railroad in last week's issue of the PAPER TRADE JOURNAL, it was incorrectly stated that the mill of the Cottrell Paper Company, Inc. at Rock City Falls nad been closed down. An officer of the company, however, writes that the mill is doing business as usual and as the railroad has not been running for a year, its sale does not affect the operation of the plant in the least.

IMPROVED Paper Bag Machines

MATADOR Paper Bag Machines are now better than ever before. They offer you tremendous speeds, dependable service, and large profits. Each of the five models, including the Baby Matador, produces a very wide range of sizes, with printing units up to three colors. They can also be equipped with our ANILINE PRINTER, for printing in three colors on all surfaces of the bag—front, back, and both sides—without slowing up production. A large number of these units are now in successful use.



H. H. Heinrich, Inc.
15 Park Row, New York
Representing WINDMOLLER & HOLSCHER

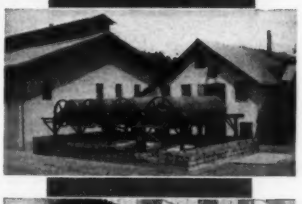
ALLIGATOR
TRADE MARK REG. U.S. PAT. OFFICE
STEEL BELT LACING

GENUINE Alligator Steel Belt Lacing is the strongest flexible joint ever developed. The entire belt end is clinched in the Alligator vise-like grip of steel. Protects belt ends also. Smooth on both sides of the belt. Patented sectional steel rocker hinge pin outlasts any other type of pin. Made in 11 sizes. Long, efficient service in every type of belting. Standardize on it. Sold at wholesale and retail the world over.

FLEXIBLE STEEL LACING CO.
4689 Lexington Street
Chicago, U.S.A.
In England at 136 Finsbury Pavement, London, E. C. 2

Look for the Alligator on the box and stamped on the lacing. Trade-Mark Reg. throughout the world.

For Your Protection and Ours
Accept No Substitutes



Top—Biggs Welded Rotary Digester. Second—Biggs Riveted Rotary Digesters. Third—Biggs Standard Cylinder Rotary Bleaching Boilers. Bottom — Biggs Tumbling Digester.

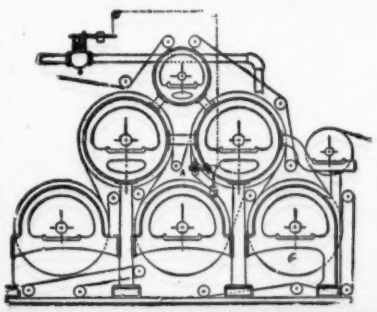
Biggs Builds

Welded Globe Rotary Digesters
Riveted Globe Rotary Digesters
Cylinder Rotary Bleaching Boilers
Tumbling Digesters, Welded or Riveted
Stationary Vertical Digesters, Welded or Riveted
Penstocks
Pipe Lines, Welded or Riveted
Welded or Riveted Steel Plate Construction of Every Description.

Write for our folder, "Unusual Steel Plate Construction"

The Biggs Boiler Works Company
East Buchtel Avenue
Akron, Ohio
New York Detroit Chicago

The Pickles Drying Regulator



WE ARE SAFE IN OUR PROPOSITION
YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES **Buckland, Conn.**

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JULY 5, 1930

SUMMARY

Cigarette paper .....13 bls., 1327 cs.
Wall paper .....19 bls., 9 cs.
Paper hangings .....9 bls., 8 cs.
News print .....985 rolls
Printing paper .....57 rolls, 66 bls., 43 cs.
Packing paper .....5 cs.
Wrapping paper .....12 cs.
Drawing paper .....46 cs.
Filter paper .....47 bls., 9 cs.
Writing paper .....26 cs.
Decalcomania paper .....35 cs.
Colored paper .....5 cs.
Tissue paper .....3 cs.
Coated paper .....7 cs.
Surface coated paper .....48 cs.
Cover paper .....2 cs.
Transparent greaseproof paper .....4 cs.
Caoutchouc paper .....6 cs.
Parchment paper .....10 cs.
Miscellaneous paper ....67 rolls, 16 bls., 306 cs.

CIGARETTE PAPER

Liggett & Myers Tobacco Co., Laconia, Liverpool, 50 cs.
De Manduit Paper Corp., Indep. Hall, Havre, 307 cs.
H. H. Strauss, Indep. Hall, Havre, 100 cs.
De Manduit Paper Corp., Schodack, St. Nazaire, 326 cs.
American Tobacco Co., Schodack, Bordeaux, 550 cs.
Standard Products Corp., Paris, Havre, 53 cs.
Liggett & Myers Tobacco Co., Paris, Havre, 19 cs.
Max Speigel & Son, M. de Comillas, Barcelona, 13 bls.
S. Alexander, Homeric, Southampton, 3 cs.
Standard Products Corp., France, Havre, 140 cs.
De Manduit Paper Corp., Vincent, Havre, 178 cs.
H. H. Strauss Vincent, Havre, 101 cs.

WALL PAPER

Guaranty Trust Co., New York, Hamburg, 4 cs.
The Prager Co., Pennland, Antwerp, 17 bls.
Schmidt & Pritchard, Europa, Bremen, 2 bls.
A. L. Diament, Homeric, Southampton, 3 cs.
Kensington Wallpaper Co., Homeric, Southampton, 1 cs.
Hudson F'd'g Co., Aquitania, Southampton, 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnewaska, London, 7 cs., 9 bls.
Whiting & Patterson Co., Inc., Aquitania, Southampton, 1 cs.

NEWS PRINT

Perkins, Goodwin & Co., Milwaukee, Hamburg, 80 rolls.
Perkins, Goodwin & Co., New York, Hamburg, 526 rolls.
Baldwin Paper Co., Inc., Cliffwood, Helsingfors, 379 rolls.

PRINTING PAPER

Keuffel & Esser Co., America, Hamburg, 9 cs., 57 rolls.
Perkins, Goodwin & Co., Milwaukee, Hamburg, 66 bls.
C. Steiner, Pennland, Antwerp, 5 cs.
E. Dietzgen & Co., Volendam, Rotterdam, 26 cs.
Whiting & Patterson Co., Inc., Aquitania, Southampton, 3 cs.

PACKING PAPER

National Freight Co., New York, Hamburg, 5 cs.

WRAPPING PAPER

Sylvania Industrial Corp., Pennland, Antwerp, 1 cs.
Standard Products Corp., Pennland, Antwerp, 9 cs.
Steffens, Jones Co., Pennland, Antwerp, 2 cs.

DRAWING PAPER

Keuffel & Esser Co., America, Hamburg, 41 cs.
H. Reeve Angel & Co., Inc., Caronia, London, 1 cs.
Devoe & Reynolds Co., Caronia, London, 4 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Caronia, London, 9 cs.
E. Fougera & Co., Homeric, Southampton, 47 bls.

WRITING PAPER

R. H. Macy & Co., Inc., New York, Hamburg, 13 cs.
Schencker's Inc., New York, Hamburg, 3 cs.
F. B. Vandegrift & Co., Paris, Havre, 1 cs.
Guibout Freres, Homeric, Southampton, 4 cs.
T. F. Wilmot, France, Havre, 5 cs.

DECALCOMANIA PAPER

C. W. Sellers, Yorck, Bremen, 6 cs.
C. W. Sellers, America, Hamburg, 6 cs.
B. F. Drakenfeld & Co., Laconia, Liverpool, 20 cs. (duplex).
L. A. Consmiller, Europa, Bremen, 3 cs.

COLORED PAPER

E. Hennigson Co., Yorck, Bremen, 2 cs.
Stencil Specialty Co., Volendam, Rotterdam, 3 cs,

TISSUE PAPER

B. F. Drakenfeld & Co., Laconia, Liverpool, 1 cs.
W. J. Byrnes, Aquitania, Southampton, 2 cs.

COATED PAPER

Pacific National Bank, New York, Hamburg, 7 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Pennland, Antwerp, 48 cs.

COVER PAPER

Int'l Forwarding Co., New York, Hamburg, 2 cs.

TRANSPARENT GREASEPROOF PAPER

Central Hanover Bank & Trust Co., New York, Hamburg, 4 cs.

CAOUTCHOUC PAPER

American Express Co., New York, Hamburg, 6 cs.

PARCHMENT PAPER

Dingelstedt & Co., Volendam, Rotterdam, 10 cs.

MISCELLANEOUS PAPER

The Borregaard Co., Inc., Kungsholm, Gothenburg, 95 rolls.
Meadows, Wye & Co., Kungsholm, Gothenburg, 16 bls., 67 rolls.
E. H. Sargent & Co., Kungsholm, Gothenburg, 15 cs.
——, New York, Hamburg, 38 cs.
P. J. Schweitzer, Paris, Havre, 6 cs.
Japan Paper Co., Paris, Havre, 3 cs.
American Express Co., Paris, Havre, 175 cs.
Whitfield Paper Works, Tsuyama Maru, Kobe, 25 cs.
H. C. Davison Co., Tai Yang, Yokohama, 6 cs.
Japan Paper Co., Tai Yang, Yokohama, 17 cs.
R. F. Downing & Co., Tai Yang, Yokohama, 5 cs.
T. N. Fairbanks, Homeric, Southampton, 1 cs.
Keller, Dorian Paper Co., France, Havre, 15 cs.

RAGS, BAGGINGS, ETC.

Bank of New York, Yorck, Bremen, 18 bls. rags.
Natl. Shawmut Bank, Yorck, Bremen, 29 bls. rags.
——, Yorck, Bremen, 22 bls. rags.
E. Mayer, America, Hamburg, 57 bls. rags.
J. Cohen & Son, Laconia, Liverpool, 20 bls. rags.
Liberty National Bank, West Eldara, Antwerp, 60 bls. rags.
Argus, Inc., West Eldara, Antwerp, 126 bls. rags.
S. Gosfrey, Indep. Hall, Havre, 4 bls. rags.
V. Galaup, Indep. Hall, Dunkirk, 12 bls. rags.
Castle & Overton, Inc., Schodack, St. Nazaire, 104 bls. rags.
——, Milwaukee, Hamburg, 20 bls. rags.
Brown Bros. & Co., Artigas, Dublin, 185 bls. rags.
C. R. Spence & Co., Artigas, Dublin, 64 bls. rags.
D. Galloway, Inc., California, Glasgow, 29 bls. paper stock.
Baring Bros., Inc., California, Glasgow, 124 bls paper stock.
——, New York, Hamburg, 30 bls. rags.
V. Galaup, Exmouth, Leghorn, 86 bls. rags.
W. Steck & Co., Sud Uruguayo, B. Ayres, 95 bls. bagging.
Banco Com'l Italiane Trust Co., Saturnia, Trieste, 71 bls. bagging.
Castle & Overton, Inc., Coahoma County, Rotterdam, 120 bls. bagging.
E. J. Keller Co., Inc., Dakotian, ——, 70 bls. bagging.
Irving Trust Co., Vincent, Dunkirk, 88 bls. paper stock.
Castle & Overton, Inc., Vincent, Havre, 39 bls. new cuttings; 36 bls. bagging; 22 bls. rags.
V. Galaup, Vincent, Havre, 16 bls. rags.
D. M. Hicks, Inc., Vincent, Havre, 77 bls. rags.
E. J. Keller Co., Inc., Hohenstein, ——, 33 bls. rags.

OLD ROPE

W. Steck & Co., Kungsholm, Gothenburg, 89 coils.

WOOD PULP

E. J. Keller Co., Inc., America, ——, 375 bls. wood pulp, 57 tons.
Johanson, Wales & Sparre, Inc., Kungsholm, Gothenburg, 375 bls. sulphate.
Parsons & Whittemore, Inc., Kungsholm, Gothenburg, 165 bls. sulphate.
M. Gottesman & Co., Inc., Kunsholm, Gothenburg, 1000 bls. sulphite.
Castle & Overton, Inc., Milwaukee, Hamburg, 3553 bls. wood pulp, 532 tons.
M. Gottesman & Co., Inc., Kolsnaren, Stockholm, 1350 bls. sulphite.
Perkins, Goodwin & Co., Kolsnaren, Sundsvall, 1300 bls. sulphite.
Johanson, Wales & Sparre, Inc., Kolsnaren, Sundsvall, 1675 bls. sulphite.
Bulkley, Dunton & Co., Kolsnaren, ——, 3800 bls. wood pulp.
Pagel, Horton & Co., Ltd., Cliffwood, Gefle, 3000 bls. wood pulp, 609 tons.

WOOD FLOUR

H. Goldberg, Kungsholm, Gothenburg, 20 bags.
A. Kramer & Co., Volendam, Rotterdam, 300 bags.
State Chemical Co., Coahoma County, Rotterdam, 568 bags, 33720 kilos.

BALTIMORE IMPORTS

WEEK ENDING JULY 5, 1930

Congoleum Nairn Co., Schodack, Bordeaux, 303 bls. rags.
Congoleum Nairn Co., Schodack, St. Nazaire, 844 bls. rags.
Congoleum Nairn Co., Exmouth, Leghorn, 34 bls. rags.
Congoleum Nairn Co., Exmouth, Genoa, 141 bls. rags.
Congoleum Nairn Co., Vincent, Dunkirk, 669 bls. rags.
Bulkley, Dunton & Co., Wanja, ——, 3375 bls. wood pulp.
Bulkley, Dunton & Co., Korsholm, ——, 2900 bls. wood pulp.
Bulkley, Dunton & Co., Cliffwood, ——, 2500 bls. wood pulp.
Bulkley, Dunton & Co., Gaasterdyk, ——, 300 bls. wood pulp.
Bulkley, Dunton & Co., Heddersheim, ——, 1875 bls. wood pulp.

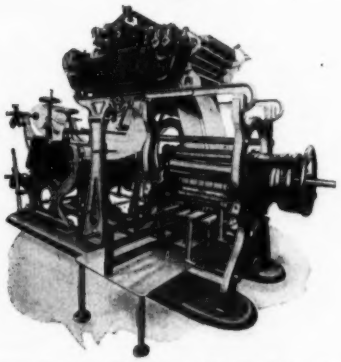
(Continued on page 76)

LAND O'LAKES CASEIN

High quality Casein made under strict laboratory control. Excellent solubility. Satisfactory viscosity. Write for sample and quotations.

LAND O' LAKES CREAMERIES, INC., MINNEAPOLIS, MINN.
New York City - Chicago - Boston - Philadelphia - Pittsburgh - Syracuse

H-S MACHINE CO.



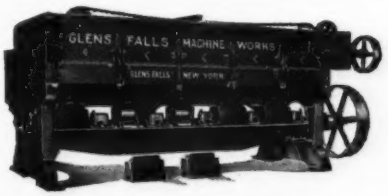
Four Color Printing Unit Attached to No. 4 Folder and Embosser

One of several designs manufactured for paper manufacturers and converters. We design and manufacture crepe machines, toilet winders, napkin folders and equipment of all types for producers of paper products.

Hudson-Sharp Machine Co.

GREEN BAY, WISCONSIN
Chicago Office: 574 Wrigley Bldg.
Manufacturers and Designers of Special Machinery

Glens Falls Rolling Action Flat Screen



CONSTANT EFFICIENCY, HIGH SCREENING CAPACITY AND CLEANER STOCK

Troubles eliminated	*Advantages given*
Toe Blocks	Smooth, Quiet Operation
Pound and Clatter	Freedom from Repairs and Adjustments
Diaphragm Distortion	Low Power Consumption
Variable Capacity	
Constant High Capacity	

Ask for descriptive bulletin

GLENS FALLS MACHINE WORKS
GLENS FALLS, NEW YORK

MANSFIELD, BOLTON & KENT
Eastern Representative
501 Fifth Avenue New York City

Paper Stock

Supplies for Paper Manufacturers

A reliable source of supply.
Established for 43 years.
Write us your needs

Mendelson Bros. Paper Stock Co.
910 S. Michigan Ave. Chicago, Ill.
Long Distance Phones—
Harrison 2840-41-2842

TAYLOR
SPIRAL RIVETED
PIPE

OFFERS THESE ADVANTAGES:

Lower cost than ordinary pipe. Less weight to erect and support. Every length made of copper alloy steel. All flanges of forged steel. Hot dip zinc or asphalt coatings for life long protection. Every length uniform and tested.

SIZES 3" TO 42" DIAM. LENGTHS UP TO 20 FT. GALVANIZED. 40 FT. ASPHALTED.

SEND FOR SPIRAL PIPE CATALOG

TAYLOR FORGE & PIPE WORKS - CHICAGO
BOX 485 CHICAGO *50 CHURCH ST., NEW YORK*

Imports of Paper and Paper Stock

(Continued from page 74)

NEW ORLEANS IMPORTS

WEEK ENDING JULY 5, 1930

Guaranty Trust Co., Lucia C., Trieste, 79 bls. rags.
Banco Com'l Italiane Trust Co., Lucia C., Trieste, 184 bls. bagging.

BOSTON IMPORTS

WEEK ENDING JULY 5, 1930

Nat'l Shawmut Bank, West Eldara, Antwerp, 14 bls. rags.
Brown Bros. & Co., West Eldara, Antwerp, 52 bls. old rope.
——, Kolsnaren, Norrsundet, 6250 bls. sulphate.
J. Andersen & Co., Kolsnaren, Sundsvall, 300 bls. sulphite.
G. F. Malcolm, Cedric, Liverpool, 6 cs. tissue paper.
Baring Bros. & Co., Dakotian, Manchester, 49 bls. new cuttings; 91 bags old pickers.
Rice & Co., Dakotian, Manchester, 29 bls. rags.
E. Butterworth & Co., Inc., Dakotian, Manchester, 452 bags hide cuttings.
E. Butterworth & Co., Inc., Dakotian, Liverpool, 27 bls. old rope.
Brown Bros. & Co., Dakotian, Liverpool, 68 bls. old rope.
Bulkley, Dunton & Co., Schenectady, ——, 2625 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING JULY 5, 1930

Phila. National Bank, West Eldara, Antwerp, 302 bls. rags.
Guaranty Trust Co., West Eldara, Antwerp, 55 bls. rags.
J. E. Bernard & Co., West Eldara, Antwerp, 12 cs. paper.
Phila. National Bank, Indep. Hall, Havre, 104 bls. rags.
V. Galaup, Indep. Hall, Havre, 44 bls. rags.
J. Horne, Indep. Hall, Havre, 5 cs. writing paper.
Phila. National Bank, Indep. Hall, Dunkirk, 826 bls. rags.
V. Galaup, Indep. Hall, Dunkirk, 39 bls. rags.
J. M. Hagy Waste Works, Indep. Hall, Dunkirk, 100 bls. rags.
W. Heisley, Indep. Hall, Dunkirk, 20 bls. rags.
P. Berlowitz, Schodack, St. Nazaire, 217 bls. rags.
D. I. Murphy, Schodack, St. Nazaire, 106 bls. rags.
Katzenstein & Keene, Inc., Schodack, St. Nazaire, 144 bls. rags.
Phila. National Bank, Schodack, St. Nazaire, 469 bls. rags.
E. J. Keller Co., Inc., Schodack, ——, 49 bls. rags.
Castle & Overton, Inc., Schodack, Bordeaux, 122 bls. rags.
Phila. National Bank, Schodack, Bordeaux, 546 bls. rags.
Katzenstein & Keene, Inc., Schodack, Bordeaux, 141 bls. rags.
Perkins, Goodwin & Co., Kolsnaren, Sundsvall, 750 bls. sulphite; 1250 bls. sulphate.
Gilman Paper Co., Kolsnaren, Sundsvall, 584 rolls news print.
Johanson, Wales & Sparre, Inc., Kolsnaren, Sundsvall, 2100 bls. sulphite.
Int'l Trust Co., Dakotian, Manchester, 43 bls. rags.
Irving Trust Co., Dakotian, Manchester, 39 bls. rags.
Nat'l Vulcanized Fibre Co., 54 bls. rags.
J. B. Moors & Co., Dakotian, Liverpool, 667 bags hide cuttings.
J. . Steer & Co., Dakotian, Liverpool, 85 coils old rope.
Bulkley, Dunton & Co., Ilmar, ——, 250 bls. wood pulp.
Bulkley, Dunton & Co., Cliffwood, ——, 825 bls. wood pulp, 165 tons.
Neidich Process Co., Cliffwood, Helsingfors, 69 cs. tissue paper.
Pagel, Horton & Co., Cliffwood, Gefle, 2250 bls. wood pulp, 457 tons.
E. J. Keller Co., Inc., Bellepline, ——, 116 bls .rags.
E. J. Keller Co., Inc., Bilderdyk, ——, 300 bls. rags.

Confirms Sale of Keystone Chemical Corp.

[FROM OUR REGULAR CORRESPONDENT]

GLENFIELD, N. Y., July 5, 1930.—The sale of the property of the Keystone Chemical and Lumber Corporation to A. M. Coit, G. A. Birkelund and Henry Fitts, of Chicago, was confirmed this week by Federal Judge Frederick H. Bryant at a session held at Malone. A hearing on the application to confirm the sale consumed the entire day following which the court ordered that the deed of the property be executed and delivered to the new owners. Among those at the hearing were G. A. Newberry, attorney for receivers, Henry Fitts, attorney for mortgages, and Perry A. Williams, representing certain lienors.

The big plant is now being overhauled preparatory to renewing operations and the new owners plan to have it running full time within a few weeks. News of the reopening was received with enthusiasm by local residents who have suffered greatly since the shutdown about a year ago. All former employees will be recalled to work in the near future.

Paper Makers Confer With Union Bag

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., June 28, 1930.—Officials of the International Brotherhood of Papermakers conferred with representatives of the Union Bag and Paper Company this week relative to the signing of new wage and working agreements. All other agreements between the International organization and various paper companies throughout the country have been settled and the conference here was the final one. It was announced that International President Burns would soon meet with J. P. Burke, head of the Pulp, Sulphite and Paper Mill Workers, for the purpose of naming a date for the coming conference of the northern district council of paper mill unions which will be held in July at Pyrites.

Swedish Pulp Prices Tend Lower

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 9, 1930.—Few changes occurred in Swedish wood pulp prices during the first half of June, although a general tendency toward lower prices was observable, particularly in minimum and maximum prices of strong sulphite and strong sulphate pulps.

Moore & White Four-Drum Winders

The Moore & White Company has issued an attractive booklet on Four-Drum Winders. It is attractively bound and is printed on high grade coated paper, very well illustrated with many handsome cuts The illustrations among others include the following of installations in representative mills: M. & W. electrically-driven Four-Drum Winder and Slitter in mill of Mead Straw Pulp Company, Chillicothe, Ohio; M. & W. belt-driven Four-Drum Winder in mill of Hollingsworth & Vose Company, East Walpole, Mass.; M. & W. belt-driven Four-Drum Winder and Slitter in mill of Champion International Company, Lawrence, Mass.; M. & W. electrically-driven Four-Drum Winder and Slitter in mill of Standard Paper Manufacturing Company, Richmond, Va.; M. & W. Ball Bearing Slitter Part in mill of Standard Paper Manufacturing Company, Richmond, Va. A copy of this booklet may be obtained free on request by writing to the Moore & White Company, 15 and Lehigh Avenue, Philadelphia, Pa.

Norwegian Pulp and Paper Exports Decline

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 9, 1930.—Exports of pulp and paper from Norway during the four months ended April 30 have not uniformly held up to the level of the preceding year's shipments. Exports of ground wood and of bleached sulphite were greater by approximately 10 per cent, but this increase was offset by declines of 29 per cent for unbleached sulphite and of 17 per cent for kraft pulp. Exports of boards, news print, and sulphite wrapping papers were greater than during the corresponding period of last year while shipments of other printing and wrapping papers decreased. Sixty per cent of the wrapping papers and 24 per cent of the printing and writing papers exported went to the United Kingdom. Other important consumers of the latter paper were France, British India, and the South American countries.

A. D. Little Gets Honorary Degree

Dr. Arthur D. Little, president of Arthur D. Little Inc., Cambridge, Mass., received an honorary degree of Doctor of Science, conferred by Tufts College, at its recent commencement.

Hardy S. Ferguson & Co.

Consulting Engineers

200 Fifth Avenue, New York City

Hardy S. Ferguson..... Member A.S.C.E., A.S.M.E., E.I.C.
Moses H. Teaze..... Member A.S.M.E., E.I.C.
J. Wallace Tower..... Member A.S.C.E., A.S.M.E.

Consultation, reports, valuations, and complete designs and engineering supervision for the construction and equipment of

Pulp and Paper Mills and other Industrial Plants.
Steam and Hydro-electric Power Plants.
Dams and other Hydraulic Structures.

H. S. TAYLOR
Consulting Engineer

Member Am. Soc. C. E.—Member Am. Soc. M. E.
Member Eng. Inst., Can.—Member A. I. E. E.

PULP, PAPER, AND FIBRE MILLS
HYDRO - ELECTRIC AND STEAM
POWER PLANTS
PLANS-SPECIFICATIONS-EVALUATIONS
REPORTS - CONSULTATIONS

Jefferson St. Arcade, Dayton, O. — Guarantee Bldg., Montreal, P. Q.

GEORGE F. HARDY
Consulting Engineer

305-309 Broadway, New York City, N. Y.

Member—Am. Soc. C.E.—Am. Soc. M.E.—Eng. Inst. Can.

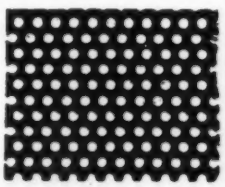
Consultation	Paper and Pulp Mills
Reports	Hydro-Electric and
Valuations	Steam Power Plants
Estimates	Plans and Specifications

ORBISON and ORBISON
Consulting Engineers
APPLETON, WIS.

Water Power Developments
Paper, Pulp and Fibre Mills
Electrical and Steam Power Plants
Plans and Specifications
Surveys, Evaluations, Reports

Thomas W. Orbison — Thomas E. Orbison

Perforated Metal Screens
For Pulp and Paper Mills



STEEL, COPPER, BRASS, BRONZE, MONEL METAL and other Alloys punched for Centrifugal and Rotary Screens, Pulp Washers, Drainer Bottoms, Filter Plates, etc.

".065" Round

CHARLES MUNDT & SONS
63-65 FAIRMONT AVE. JERSEY CITY, N. J.

JOHN WALDRON CORPORATION

Paper Converting Machinery Builders Since 1827
Main Office and Works—NEW BRUNSWICK, N. J.
CHICAGO NEW YORK

BELLE ALKALI COMPANY, BELLE, W. VA.
LIQUID CHLORIDE BELLE BRAND CAUSTIC SODA

Cylinders—Ton Tanks—Tank Cars
76%—Solid Liquid Flake
Arnold, Hoffman & Co. Inc. Sole Agents
PROVIDENCE BOSTON NEW YORK
PHILADELPHIA CHARLOTTE

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, July 9, 1930.

Affected by the holidays, the local paper market was rather quiet during the past week. However, the industry is considered to be in a satisfactory position for the time of year, despite the general business depression, and quotations on the various standard grades of paper are holding up very well, in most instances. Inquiries for future needs are fairly numerous and the outlook for the autumn is promising.

News print production is being maintained at around 71 per cent of total capacity in the United States and Canada, according to information gathered by the News Print Service Bureau. Contract shipments are going forward to the publishers in fair volume for the season. Stocks at the news print mills are not excessive. There have been no further developments in the price situation.

The position of the paper board market is practically unchanged. Offerings are amply sufficient for current requirements. The price situation continues unsatisfactory. Although demand has been restricted, owing to the holidays, the fine paper market is exhibiting a strong tendency. Prices are generally holding to schedule. Tissues are moving in seasonal volume. The coarse paper market was rather dull.

Mechanical Pulp

Conditions in the ground wood market are satisfactory although the prevailing demand for both imported and domestic mechanical pulp is only moderately active. Production is being maintained in sufficient volume to take care of current needs. Prices are generally holding to formerly quoted levels, and there is little talk of concessions around.

Chemical Pulp

The chemical pulp market was decidedly dull during the past week. Prices, however, on most of the grades are holding up to previously quoted levels. Imported kraft pulp prices declined slightly. No. 1 kraft is now offered at from $1.65 to $2.15, while No. 2 kraft is selling at from $1.55 to $1.85, on dock, Atlantic ports.

Old Rope and Bagging

Steadiness prevails in the old rope market. Despite the holidays, both foreign and domestic old manila rope are fairly active. Mixed rope is going forward in moderate volume. Old rope prices are practically unchanged. The bagging market is exhibiting a seasonal trend. Scrap bagging is in excellent request but roofing bagging is dull.

Rags

Demand for cotton cuttings was satisfactory, considering the usual midsummer lull which now prevails. White rags, in particular, are in excellent request. Mixed rags are rather quiet. Roofing grades are inactive. Domestic rag prices are holding to schedule, in most instances. The position of the imported rag market is unchanged and prices abroad are still considered too high, in most quarters.

Waste Paper

Some improvement was noticed in the local paper stock market. While the board mills are not displaying much interest at present in the lower grades the time should be near when many manufacturers will have to replenish their supplies. The better grades of waste paper continue steady. Both hard and soft white shavings are fairly active, while old kraft machine compressed bales are moving in good volume. Prices generally remain unaltered.

Twine

Most of the business transacted in the local twine market was along routine lines. Demand for the various grades is mostly seasonal at present but greater activity is anticipated in the near future. Despite keen competition prices are generally holding to previously quoted levels and shading is infrequent.

May Acquire Watertown Pulpwood Terminal

[FROM OUR REGULAR CORRESPONDENT]

OGDENSBURG, N. Y., July 7, 1930.—A group of Watertown paper mill men are reported to be negotiating for the purchase of the local pulpwood terminal which is owned by local business interests. All equipment at the terminal is owned by the International Paper Company, and the recent reduction in shipments handled here has brought rumors that it was to be abandoned. The company has turned down a number of offers for its holdings in recent years but it is said on good authority that there is a good chance of the property changing hands in the near future.

The port terminal was originally built to handle pulpwood for the De Grasse paper mill at Pyrites which was acquired a number of years ago by International from the *New York World* interests. All equipment at the terminal was included in the sale but the company decided to lease rather than buy the site. Although a site for establishing a pulpwood terminal at Morristown was acquired by Watertown interests a few months ago it was learned that no arrangements for establishing it have yet been made.

Paper Men Honored by Rotary

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, June 30, 1930.—Thomas Harvey, of the Gardner-Harvey Paper Company, recently was honored by election to the presidency of the Rotary Club of Middletown, the Paper City. Mr. Harvey succeeds Wade E. Miller, widely known in educational circles, as head of the organization. He has been an active member of the Rotary since its early days and he has been a member of the Board of Directors and most active in committee work.

D. D. Thirkield, personnel director of the Sorg-Oglesby-Smith Paper Company, was elected to the vice-presidency and succeeds George Denny. Mr. Thirkield has been an active member of the club and is editor of the Middletown Rotarian, a club publication.

White River Paper Co. Incorporates

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., July 7, 1930.—Articles of incorporation have been filed with the secretary of state of Indiana by the White River Paper Company, Inc., having a principal place of business in this city. The corporation is formed to buy and sell paper and paper boards of all kinds. The first board of directors is composed of I. F. Kahn, S. C. Kahn and Charles F. Kahn.

SKID-EM-ON-TRUCKS
A COMBINED LOADER-CARRIER-UNLOADER THAT WILL SAVE YOU MONEY AND PREVENT ACCIDENTS
435 SOUTH SENATE AVE. INDIANAPOLIS IND.
CENTRAL MACHINE WORKS

FREDERICK L. SMITH
21 EAST 40TH STREET, NEW YORK
PULP AND PAPER MILL ENGINEER

"THE FOURDRINIER THAT TOOK THE IRE OUT OF WIRE"
INTERNATIONAL WIRE WORKS
Menasha, Wisconsin

JAMES W. SEWALL
CONSULTING FORESTRY
JAMES W. SEWALL, Old Town, Maine
PHILLIPS & BENNER, Ruttan Block, Port Arthur, Ontario

Appleton
Felts and Jackets

Cel-U-Del FOR SIZING KRAFT
Cel-U-Cook FOR COOKING STRAW
Cel-U-Cize FOR FINISH
THE MODERN CHEMICALS FOR PAPER
The Cel-U-Del Corp.
2256-58 SOUTH UNION CHICAGO, ILL.

Bailey Meter Company
1056 Ivanhoe Road, Cleveland, Ohio
Specializing in
Power Plant Metering Equipment

CHIP SCREENS
CHIP BREAKERS
CHIP SEPARATORS
CONVEYORS
AGITATORS
RYTHER AND PRINGLE COMPANY CARTHAGE N.Y.
CANADIAN INGERSOLL-RAND CO. LTD. 10 Phillips Square, MONTREAL, CANADA
PULP SHREDDERS
SAW SLASHERS
RELIEF GAS COOLERS
LOG HAULS
SPLITTERS

ROSS SYSTEMS
HEATING—VENTILATING—DRYING
J. O. ROSS ENGINEERING CORPORATION
201 North Wells Street, CHICAGO
122 East 42nd St., NEW YORK
311 Lewis Building, PORTLAND, ORE.

KARL A. LEFREN, Inc.
CONSULTING ENGINEERS
171 Madison Ave. New York City

PUMPS
For Every
Pulp and Paper Mill Purpose
Let Us Help Solve Your Problems
Lawrence Machine & Pump Company
Lawrence, Mass.

ANALYSES and TESTS of
PAPER, PULP AND PAPER-MAKING MATERIALS
FIBER ANALYSES SPECIFICATIONS
OFFICIAL PULP SAMPLING AND TESTING
Arthur D. Little, Inc.
Analytical Department
30 CHARLES RIVER ROAD, CAMBRIDGE, MASS.

Appleton Wires
are good wires
APPLETON WIRE WORKS INC., APPLETON, WIS.

MID-WEST HI-SPEED BEATERS
MID-WEST LIGHTER STANDS
MID-WEST BANDLESS ROLLS
WRITE FOR INFORMATION
THE MID-WEST MACHINE COMPANY
DAYTON, OHIO

Perforated Metal Screens
for every purpose
also elevator buckets of all kinds; chutes; hoppers; stacks and tanks.
MITCO Products — Interlocked Steel Grating; Shur-Site Stair Treads; Armorgrids.
HENDRICK MANUFACTURING CO.
50 Dundaff St., Carbondale, Pa.
New York: 30 Church St. Pittsburgh: Koppers Bldg.

JOHNSON & WIERK
INCORPORATED
CONSULTING ENGINEERS
For Paper Mills
GRAND CENTRAL TERMINAL BLDG. NEW YORK

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, July 9, 1930.

BLANC FIXE.—Supplies of blanc fixe are moving into consumption in satisfactory volume. Prices are holding to formerly quoted levels. The pulp is selling at from $42.50 to $45.00 per ton, in bulk, while the powder is offered at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—Demand for bleaching powder was only moderately active during the past week. Shipments against contract are going forward in normal volume for the season. Bleaching powder is quoted at from $2.00 to $2.35 per 100 pounds, in drums, at works, according to quantity.

CASEIN.—Despite the increased import duty the casein market is practically unchanged. Domestic standard ground is quoted at 13½ cents and finely ground at 15 cents per pound. Argentine standard ground is selling at 13½ cents and finely ground at 14½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Conditions in the caustic soda market are fairly satisfactory. The contract movement is well up to average. Solid caustic soda is still quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, all in bags, car lot quantities.

CHINA CLAY.—The china clay market is in a sound position. Contract shipments are moving in good volume. Prices remain unchanged. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—Trading in the chlorine market was fairly active. Due to keen competition for orders the price situation is rather easy. Inquiries for future needs are moderate. Chlorine is quoted at from $2.40 to $2.45 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—There were no radical changes recorded in the rosin market. Prices are weak. The grades of gum rosin used in the paper mills are quoted at from $6.55 to $6.60 per 280 pounds, in barrels, at yard. Wood rosin is selling at from $6.25 to $6.35 per 280 pounds, in barrels, on dock.

SALT CAKE.—Steadiness prevails in the salt cake market although demand is somewhat restricted at present. Prices are generally holding to schedule. Salt cake is quoted at from $22 to $25 per ton, while chrome salt cake is selling at from $20 to $21 per ton, in bulk, at works.

SODA ASH.—Contract shipments of soda ash are going forward to the paper mills in satisfactory volume. Demand for future requirements are fairly numerous. Prices are holding to schedule. Contract quotations of soda ash, in car lots, at works, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—Depression in the corn industry has not affected the starch market so far. Supplies are moving to the paper mills in fairly good volume. Prices remain unchanged. Special paper making starch is quoted at $3.72 per 100 pounds, in bags, and at $3.99 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—The sulphate of alumina market is displaying a steady trend. Shipments against contract are proceeding in normal volume. Prices remain unchanged. Commercial grades are quoted at from $1.40 to $1.55, and iron free at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—Most of the business transacted in the sulphur market was routine. Sulphur is quoted at $18 per ton, at mine, on orders of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and nearby car loads, the quotation is $21 per ton.

TALC.—Seasonal conditions prevail in the talc market. Demand is somewhat restricted at present. Prices are holding to previously quoted levels. Domestic talc is selling at from $16 to $18 per ton, at mine, while imported talc is offered at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@53.25
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	5.75	@ 6.25
No. 2 Domestic	3.75	@ 5.00
Southern	3.75	@ 4.75
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	37.50	@ —
Straw	50.00	@ —
Chip	35.00	@ —
Binders' Boards	65.00	@70.00
Wood Pulp	90.00	@95.00
65 Test Jute Liner	37.50	@40.00
85 Test Jute Liner	42.50	@45.00
Sgl. Mla. Ll. Chip	47.50	@50.00

Mechanical Pulp

(On Dock)

No. 1 Imported—		
Moist	28.00	@30.00
Dry	30.00	@32.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@30.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.00	@ 4.25
Easy Bleaching	2.70	@ 2.90
No. 1 strong unbleached	2.40	@ 2.65
Mitscherlich unbleached	2.50	@ 2.85
No. 2 strong unbleached	2.35	@ 2.50
No. 1 Kraft	1.65	@ 2.15
No. 2 Kraft	1.55	@ 1.85
Sulphate—		
Bleached	3.40	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.00	@ 4.75
Easy Bleaching Sulphite	2.55	@ 2.85
News Sulphite	2.35	@ 2.60
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.10	@ 3.30
Soda Bleached	2.90	@ 3.20

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	9.00	@ 9.50
New White, No. 2	7.00	@ 7.50
Silesias No. 1	7.25	@ 7.50
New Unbleached	10.00	@10.50
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Blue Overall	7.00	@ 7.50
Washables	4.50	@ 5.00
Fancy	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.50	@ 1.60
No. 1	1.50	@ 1.60
No. 2	1.15	@ 1.25
No. 3	1.10	@ 1.20
No. 4	1.00	@ 1.10
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.25	@ 7.75
Unbleached Cuttings	9.75	@10.25
New White Cuttings	9.00	@ 9.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.25	@ 5.75

Old Rags

No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.75	@ 6.75
No. 3 White Linens	4.75	@ 5.25
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	2.75	@ 3.75
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.95	@ 2.15
Extra Light Prints	2.75	@ 3.00
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.95	@ 2.10
Dutch Blue Cottons	2.15	@ 2.30
French Blue Linens	2.65	@ 2.75
German Blue Linens	2.30	@ 2.50
German Blue Cottons	2.00	@ 2.10
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.60	@ 1.70
Dark Cottons	1.15	@ 1.25
Old Shopperies	1.10	@ 1.20
New Shopperies	1.20	@ 1.25
French Blues	2.00	@ 2.10

Old Rope and Bagging

(Prices to Mill f. o.b. N. Y.)

Gunny No. 1—		
Foreign	1.65	@ 1.75
Domestic	1.65	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	3.25	@ 3.40
Domestic	3.50	@ 3.75
New Burlap Cut	2.50	@ 2.75
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.00	@ 3.25
Hard, white, No. 2	2.40	@ 2.55
Soft, white, No. 1	2.65	@ 2.75
White envelope cuttings	2.90	@ 3.10
Flat Stock—		
Stitchless	1.40	@ 1.50
Overissue Mag.	1.40	@ 1.50
Solid Flat Book	1.30	@ 1.40
Crumpled No. 1	1.00	@ 1.10
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.30	@ 1.40
New B. B. Chips	.35	@ .45
Manilas—		
New Env. Cut.	2.40	@ 2.60
New Cuttings	1.50	@ 1.75
Extra No. 1 old	1.25	@ 1.35
Print	.60	@ .65
Bogus Wrapper	.60	@ .65
Container	.40	@ .50
Old Kraft Machine—		
Compressed bales	1.50	@ 1.60
News—		
No. 1 White News	1.77	@ 1.87
Strictly Overissue	.50	@ .55
Strictly Folded	.40	@ .45
No. 1 Mixed Paper	.22	@ .27
Common Paper	.15	@ .20

What Pulp Is To Paper Wire Is To Fourdrinier Wire

THE excellence of your paper depends on the care and skill used in drawing and annealing the wire from which your Fourdrinier wires are woven.

That is why the drawing and annealing of Eastwood "Perfection" Wire is all done in our plants: we want to have all the steps of this highly important process completely under our control. The raw wire is drawn through *diamond dies* and annealed in a special furnace.

EASTWOOD WIRE CORPORATION

Established 1877, Belleville, N. J.

"American Paper Made on American Wires"

EASTWOOD
"Perfection" WIRES
"Perfection" VALVES

KELLOGG

FORGE AND HAMMER LAP WELDED
BOILER DRUMS..HEADERS
RECEIVERS...SEPARATORS
COMPLETE POWER PLANT PIPING

THE M. W. KELLOGG CO.
225 BROADWAY, N. Y. C.
Birmingham Boston Chicago
Los Angeles Pittsburgh Tulsa

ALL KELLOGG FORGE AND HAMMER LAP WELDED PRODUCTS ARE INSURABLE

FOURDRINIER WIRES

In brass, bronze and phosphor bronze, widths up to and including 250 inches.

Also
CYLINDER FACES
WASHER WIRES
and CORDUROY CLOTH

THE W. S. TYLER COMPANY
Cleveland, Ohio, U. S. A.

CLAY

AMERICAN MADE FOR AMERICAN TRADE

500 Tons Daily

TWO LEADING AMERICAN CLAYS

H.T. BRAND

FOR COATING & FILLING AND KLONDYKE BRAND FILLER

EDGAR CLAYS ARE THE RESULT OF ALMOST A HALF CENTURY OF EXPERIENCE IN WASHING CLAYS.

TECHNICAL SERVICE AVAILABLE BOTH FOR COATING AND LOADING WITHOUT CHARGE.

Send for Samples

EDGAR BROS. CO.
50 Church St. Hudson Terminal Bdlg.
New York City

Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrappings, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¾	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	5.00	@	5.50
Southern Kraft	3.75	@	4.00
No. 2 Kraft	3.75	@	4.00
Wood Tag Boards	.04¼	@	.06¼
Sulphite Sreenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.35	@	2.40
White Env. Cut-			
No. 1 Soft Shavings	2.10	@	2.15
No. 1 Mixed	.30	@	.35
No. 2 Mixed	.25	@	.35
Ledger & Writings	1.25	@	1.35
Solid Books	1.05	@	1.10
Blanks	1.60	@	1.65
Krafts	1.30	@	1.40
New Kraft Cuts	1.50	@	1.70
Manila Envelope Cuttings	1.65	@	1.70
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.45	@	.50
Folded News (over-			
issue	.40	@	.45
Old Newspapers—			
No. 1	.35	@	.40
No. 2	.30	@	.35
Mixed Papers—			
No. 1	.30	@	.35
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.05	@	.40
Ledgers	.08	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.09	@	.20
Book, M. F.	.05	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.09	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.07	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 1 Kraft	.05¼	@	.06¾
No. 2 Kraft	.03¾	@	.04¼
Southern Kraft No. 1	—	@	.03¾
Southern Kraft No. 2	—	@	.03¼
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	70.00
News Board	37.50	@	38.50
Chip Board	32.50	@	35.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed.	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.65	@	2.75
No. 2 Hard White	2.30	@	2.50
No. 1 Soft White	2.25	@	2.50
No. 2 Soft White	1.40	@	1.60
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.60	@	.70
Solid Ledger Stock	1.55	@	1.65
Writing Paper	1.05	@	1.25
No. 1 Books, heavy	1.00	@	1.20
No. 2 Books, light	.90	@	1.00
No. 1 New Manila	2.15	@	2.30
No. 1 Old Manila	1.50	@	1.60
Print Manila	.50	@	.60
Container Manila	.45	@	.50
Old Kraft	1.35	@	1.40
Common Paper	.25	@	.35
No. 1 Mixed Paper	.25	@	.30
Straw Board, Chip	.35	@	.40
Binders Board, Chip	.35	@	.45
Overissue News	.45	@	.50
Old Newspaper	.25	@	.30

Domestic Rags (Old)

White No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
M. G.	6.00	@	—
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.25	@	1.30
Repacked	.80	@	.90
No. 2	.70	@	.75
No. 3 (Roofing)	.30	@	.40
No. 4	.30	@	.40
No. 5A	.70	@	.75
B	.40	@	.60
C	.25	@	.30

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06¼
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	.06
No. 2 Kraft	.03¼	@	.05
(Less car-freight to Boston)			
Southern Kraft	.03¾	@	.04¼
(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots:)			
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	52.50
Single White, Patent Coated Newsboard Bender	65.00	@	80.00
Wood Pulp Board	75.00	@	80.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	—	@	2.25
No. 1 Books, Heavy	1.30	@	—
No. 1 Books, Light	1.05	@	—
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	1.35	@	1.45
Print Manila	.75	@	.80
No. 1 Mixed Paper	.20	@	—
Overissue News	.40	@	.50
Old Newspapers	.35	@	.40
Box Board, Chip	.45	@	.50
Corrugated Boxes	—	@	.40

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.75
Domestic	1.45	@	—
Manila Rope—			
Foreign	3.00	@	3.25
Domestic	3.50	@	—
Transmission Rope	2.25	@	2.40
Mixed Strings	.90	@	—
Jute Wool Strings	.90	@	1.00
Jute Carpet Threads	1.05	@	1.15
Scrap Burlaps	1.25	@	1.40
Scrap Sisal	1.50	@	1.75
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.75	@	2.00
Australian Wool Pouches	2.50	@	3.00

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1.	.08	@	.08½
Silesias No. 1	.06	@	.06¼
New Unbleached	—	@	.09¼
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¾	@	.06¾
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.25	@	1.50
No. 2	.90	@	1.00
No. 3	.85	@	.90
No. 4	.75	@	.85

Foreign Rags
(F. o. b. Boston)

Dark Cottons	.90	@	1.00
New No. 1 Shirt Cuttings	8.50	@	9.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	4.50	@	4.75
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	2.00
Old Linsey Garments	1.25	@	—

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	10.00	@	11.50
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.00	@	—
No. 1 Manila	5.40	@	—
Fiber	5.40	@	—
Kraft, M. F.	5.90	@	—
White, No. 2	2.00	@	2.25

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	32.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	72.50	@	75.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writ-			
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.09½	@	.10
Fancy Shirt Cuttings	.06	@	.06¼

Advertising matter paged consecutively with text, has been removed here to lessen the bulk of this volume.

S

Se

It
be
w

Fo
he

Fo
Co
Ce
ch

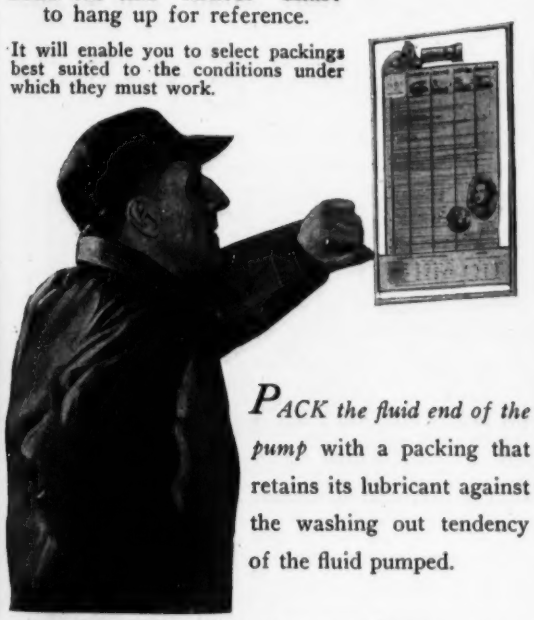
Fo
th

INDIANAPOLIS JUL 22 '30 PUBLIC LIBRARY

Select Packings Intelligently

Send for this "A.B.C." Chart
to hang up for reference.

It will enable you to select packings best suited to the conditions under which they must work.



PACK the fluid end of the pump with a packing that retains its lubricant against the washing out tendency of the fluid pumped.

For Steam Superheat and Compressed Air

For Water (Hot and Cold) Calcium Brine, Centrifugal and Reciprocating Pumps.

For Caustic Sodas, Acids, Alkalis.

For Gasoline, Naphtha and all Distillates of Petroleum.

To prove our claims for long satisfactory service, let us send you without charge or obligation working samples of these packings to test under your own conditions. State condition of service and size packing desired.

To avoid shaft friction, a packing must have sufficient lubricant, and the lubricant must be such as will resist the washing out tendency of the fluid it comes in contact with.

The packings listed on this chart are designed to give long, satisfactory service under indicated conditions.

GREENE, TWEED & CO.

Sole Manufacturers

109 Duane St., New York, N. Y.

Mail this Coupon for copy of Chart

Greene, Tweed & Co.
109 Duane St., New York, N. Y.
Please mail me a copy of your "A.B.C." Chart.

Name .....
Position .....
Firm .....
Address 12

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-NINTH YEAR

Published Every Thursday by the LOCKWOOD TRADE JOURNAL CO., Inc.

GEO. S. MACDONALD, President: **J. BANNINGA**, Sec.-Treas.

Executive and Editorial Offices: 10 East 39th Street, New York

Chicago Office: **123 West Madison St.**

TABLE OF CONTENTS

Copyright, 1930, by the Lockwood Trade Journal Co., Inc.

Crown Zellerbach Corp. Shows Expansion 23
Pennsylvania Mills Advance Operation 24
Ranier Pulp Has Profitable Year 25
Australia Raises Duty on News Print 26
Russian Pulpwood Arrives for I. P. Mills 26
To Build New Dam at Hudson Falls 26
Tomahawk Mill Unit Nears Completion 30
Chip Board Rates from Watertown District 30
William Size & Service Corp. Formed 30
Chicago Market Exhibits Quiet Trend 32
Unity Paper Mills Case Postponed 32
Output Well Maintained in Ontario 34
Dryden Products Demand Keeps Up 34
Huge Timber Project Proposed in Colorado .. 36
Construction News 38
Boston Paper Market Irregular 40
Bids for Government Paper 40
Obituary 42
Ohio Men Get Paper Patents 42
Trade Mark Department 44
New York Trade Jottings 46
Paper and Paper Stock Imports 48
New Boiler Plant at Gatineau 50
Editorial **52**
TAPPI Fall Meeting at Erie 53
Finland Exports More Pulp and Paper 53

Technical

The Delthirna Sizing Process 55
TAPPI Notes 56
New TAPPI Members 56
Rate of Flow Test for Evaluating Ground Wood 57
Ground Wood Pulp Evaluation 61
Current Paper Trade Literature 66

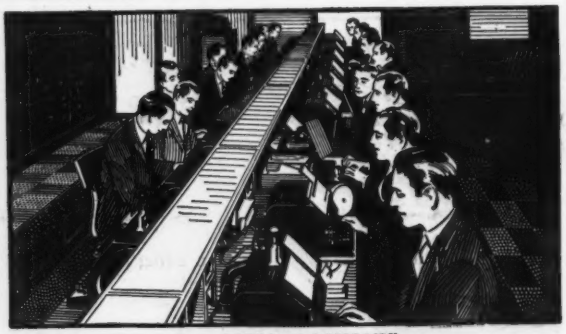
Cost Section **67**
Russian Pulpwood Shipments Increase 71
Work Starts at Panama City 71
Imports of Paper and Paper Stock 72
New York Market Review **76**
Miscellaneous Markets **78**
Market Quotations **78**

THE PAPER TRADE JOURNAL is indexed in Industrial Arts Index

Want and For Sale Advertisements, 83, 84, 85, 86

Telephone Typewriters cut Operating costs for Business firms . . . Large and Small

THE FIRST NATIONAL CORPORATION, BOSTON
New York Office



E. A PIERCE & COMPANY
New York Office

S K. F. INDUSTRIES, INC.
New York Office

AUTOMOTIVE MATERIALS CORPORATION
Detroit, Michigan

TELEPHONE Typewriter Service is proving its worth for the small concern as well as the large. It permits a paper manufacturing company to co-ordinate the activities of its New England mill and New York sales office.

Production at the mill starts a few minutes after orders are received in New York. Thus, expensive stock on hand is reduced to a minimum. Invoices are mailed the same day orders are received.

This modern business aid brings all units of an organization "under one roof." It provides accurate, instantaneous, *two-way typewritten* communication. Deliveries are speeded up, overhead reduced, production curves smoothed out. Effective centralized control is made possible.

The scope of Telephone Typewriter Service is virtually unlimited. It helps every department—sales, order, purchasing, traffic, operating, etc.—to function with greater efficiency. Your local Bell Telephone Business Office will gladly have a representative show you how it will be of value to your firm.